

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-CY  
UFI : 9JWE-5WQR-1DKT-1HT8

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-CY

### Safety Data Sheet

#### Precautionary statements

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	4 – 5	Eye Dam. 1, H318
Copper compound	-	1 – 5	Not classified

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

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### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

Inkjet Printing ink.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL and PNEC

Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

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<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

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<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**
**Appropriate engineering controls**
**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**
**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**
**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**
**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**
**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**
**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : Cyan.

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information****Other safety characteristics**

VOC content : &lt; 940 g/l

**SECTION 10: Stability and reactivity****10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-CY**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

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**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

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**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

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<b>Abbreviations and acronyms:</b>	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

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Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-MG  
UFI : QMWE-PWE4-CDK9-PVDA

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-MG

### Safety Data Sheet

#### Precautionary statements

Prevention	<ul style="list-style-type: none"> <li>: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)</li> <li>Wash hands, forearms and face thoroughly after handling. (P264)</li> <li>Wear protective gloves/protective clothing/eye protection/face protection. (P280)</li> </ul>
Response	<ul style="list-style-type: none"> <li>: IF ON SKIN: Wash with plenty of water. (P302+P352)</li> <li>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)</li> <li>Immediately call a POISON CENTER or doctor. (P310)</li> <li>Specific treatment (see supplemental first aid instruction on this label). (P321)</li> <li>If skin irritation occurs: Get medical advice/attention. (P332+P313)</li> <li>Take off contaminated clothing and wash it before reuse. (P362+P364)</li> <li>In case of fire: Use ... to extinguish. (P370+P378)</li> </ul>
Storage	<ul style="list-style-type: none"> <li>: Store in a well-ventilated place. (P403)</li> </ul>
Disposal	<ul style="list-style-type: none"> <li>: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)</li> </ul>

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
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#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
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Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

## Safety Data Sheet

### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

Inkjet Printing ink.

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### 8.1. Control parameters

#### DNEL and PNEC

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DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

**Safety Data Sheet**

<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**
**Appropriate engineering controls**
**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**
**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**
**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**
**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**
**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**
**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Magenta.

## Safety Data Sheet

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

## 9.2. Other information

### Other safety characteristics

VOC content : < 940 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-MG**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**Safety Data Sheet**
**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

## Safety Data Sheet

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

## Safety Data Sheet

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

**Full text of H- and EUH-statements:**

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-YE  
UFI : 7QWE-6W3H-NDKT-C6YD

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-YE

### Safety Data Sheet

#### Precautionary statements

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	4 – 5	Eye Dam. 1, H318

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

## Safety Data Sheet

### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

Inkjet Printing ink.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL and PNEC

Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

**Safety Data Sheet**

<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**
**Appropriate engineering controls**
**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**
**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**
**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**
**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**
**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**
**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : Yellow.

## Safety Data Sheet

Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

## 9.2. Other information

### Other safety characteristics

VOC content : < 940 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

**Safety Data Sheet**
**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**
**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**
**Eco-Solvent Ink TR3-YE**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

Safety Data Sheet

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**

**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

## Safety Data Sheet

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

## Safety Data Sheet

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-BK  
UFI : YTWE-PWSW-YDK9-0JJF

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

**Eco-Solvent Ink TR3-BK**
**Safety Data Sheet**
**Precautionary statements**

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	4 – 5	Eye Dam. 1, H318
Carbon Black	CAS-No.: 1333-86-4 EC-No.: 215-609-9 REACH-no: 01-2119969946-13	1 – 5	Not classified

**Specific concentration limits:**

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

**Safety Data Sheet**
**For emergency responders**

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**
**7.1. Precautions for safe handling**

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

**7.3. Specific end use(s)**

Inkjet Printing ink.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**DNEL and PNEC**

<b>Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

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<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**

**Appropriate engineering controls**

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**

**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**

**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**

**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : Black.

## Safety Data Sheet

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

## 9.2. Other information

### Other safety characteristics

VOC content : < 940 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).

**Carbon Black (1333-86-4)**

IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

<b>Eco-Solvent Ink TR3-BK</b>	
Persistence and degradability	No data available.

**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**Safety Data Sheet**
**12.6. Endocrine disrupting properties**

No additional information available

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

## Safety Data Sheet

**Inland waterway transport**

Not regulated

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
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**Safety Data Sheet**

<b>Abbreviations and acronyms:</b>	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative

## Safety Data Sheet

**Abbreviations and acronyms:**

ED	Endocrine disruptor
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**Full text of H- and EUH-statements:**

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-LC  
UFI : 0VWE-6WGA-8DKS-PW4H

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-LC

### Safety Data Sheet

#### Precautionary statements

Prevention	<ul style="list-style-type: none"> <li>: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)</li> <li>Wash hands, forearms and face thoroughly after handling. (P264)</li> <li>Wear protective gloves/protective clothing/eye protection/face protection. (P280)</li> </ul>
Response	<ul style="list-style-type: none"> <li>: IF ON SKIN: Wash with plenty of water. (P302+P352)</li> <li>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)</li> <li>Immediately call a POISON CENTER or doctor. (P310)</li> <li>Specific treatment (see supplemental first aid instruction on this label). (P321)</li> <li>If skin irritation occurs: Get medical advice/attention. (P332+P313)</li> <li>Take off contaminated clothing and wash it before reuse. (P362+P364)</li> <li>In case of fire: Use ... to extinguish. (P370+P378)</li> </ul>
Storage	<ul style="list-style-type: none"> <li>: Store in a well-ventilated place. (P403)</li> </ul>
Disposal	<ul style="list-style-type: none"> <li>: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)</li> </ul>

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	5 – 6	Eye Dam. 1, H318
Copper compound	-	< 1	Not classified

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

## Safety Data Sheet

### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

Inkjet Printing ink.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL and PNEC

Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

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<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**
**Appropriate engineering controls**
**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**
**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**
**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**
**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**
**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**
**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Cyan.

## Safety Data Sheet

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information****Other safety characteristics**

VOC content : &lt; 940 g/l

**SECTION 10: Stability and reactivity****10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

**Safety Data Sheet**
**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**
**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**
**Eco-Solvent Ink TR3-LC**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**Safety Data Sheet**
**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

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**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

## Safety Data Sheet

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

**Full text of H- and EUH-statements:**

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-LM  
UFI : NYWE-QW5Q-KDK9-A7QK

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-LM

### Safety Data Sheet

#### Precautionary statements

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	5 – 6	Eye Dam. 1, H318

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
------------------	---

**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

**Safety Data Sheet**
**For emergency responders**

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**
**7.1. Precautions for safe handling**

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

**7.3. Specific end use(s)**

Inkjet Printing ink.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**DNEL and PNEC**

<b>Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

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<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**

**Appropriate engineering controls**

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**

**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**

**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**

**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Magenta.

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information****Other safety characteristics**

VOC content : < 940 g/l

**SECTION 10: Stability and reactivity****10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-LM**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**Safety Data Sheet**
**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

## Safety Data Sheet

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

**Safety Data Sheet**

<b>Abbreviations and acronyms:</b>	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-WH  
UFI : 2DXE-7WMQ-3DKR-NXMW

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

**Eco-Solvent Ink TR3-WH**
**Safety Data Sheet**
**Precautionary statements**

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	5 – 15	Eye Dam. 1, H318
Titanium oxide (TiO2)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 EC Index-No.: 022-006-00-2 REACH-no: 01-2119489379-17	5 – 15	Not classified
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	4 – 5	Eye Dam. 1, H318

**Safety Data Sheet**

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## Safety Data Sheet

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures : Stop leak if safe to do so. Absorb spillage to prevent material damage.

**For non-emergency personnel**

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

**For emergency responders**

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep cool. Protect from sunlight.

Packaging materials : Store always product in container of same material as original container.

**7.3. Specific end use(s)**

Inkjet Printing ink.

**Safety Data Sheet**
**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**DNEL and PNEC**
**Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)**
**DNEL/DMEL (Workers)**

Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>

**DNEL/DMEL (General population)**

Long-term - systemic effects, oral	1.71 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day

**Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)**
**DNEL/DMEL (Workers)**

Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>

**DNEL/DMEL (General population)**

Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>

Safety Data Sheet

Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)	
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
Formamide, N,N-diethyl- (617-84-5)	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

8.2. Exposure controls

**Appropriate engineering controls**

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**

**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**

**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**

**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

## Safety Data Sheet

**Environmental exposure controls****Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: white.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1 – 1.1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information****Other safety characteristics**

VOC content : < 940 g/l

**SECTION 10: Stability and reactivity****10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

## Safety Data Sheet

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).

#### Titanium oxide (TiO<sub>2</sub>) (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

Safety Data Sheet

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-WH**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

**Safety Data Sheet**

ADR	IMDG	IATA	ADN	RID
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**EU-Regulations**
**REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

## Safety Data Sheet

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic

## Safety Data Sheet

**Abbreviations and acronyms:**

PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

**Full text of H- and EUH-statements:**

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-OR  
UFI : S4XE-QWJH-6DK8-NWVQ

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-OR

### Safety Data Sheet

#### Precautionary statements

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	5 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	4 – 5	Eye Dam. 1, H318

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

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### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

Inkjet Printing ink.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL and PNEC

Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

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<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

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<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**

**Appropriate engineering controls**

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**

**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**

**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**

**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : orange.

## Safety Data Sheet

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

## 9.2. Other information

### Other safety characteristics

VOC content : < 940 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-OR**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

Safety Data Sheet

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**

**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

## Safety Data Sheet

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

## Safety Data Sheet

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-GR  
UFI : U7XE-7W7W-GDKS-A8FS

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

## Eco-Solvent Ink TR3-GR

### Safety Data Sheet

#### Precautionary statements

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	4 – 5	Eye Dam. 1, H318
Copper compound	-	1 – 5	Not classified
Additive	-	< 5	Not classified

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
------------------	---

**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

## Safety Data Sheet

### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

Inkjet Printing ink.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL and PNEC

Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

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<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**
**Appropriate engineering controls**
**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**
**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**
**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**
**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**
**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**
**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : Green.

## Safety Data Sheet

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Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

## 9.2. Other information

### Other safety characteristics

VOC content : < 940 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-GR**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

Safety Data Sheet

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**

**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

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**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

## Safety Data Sheet

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-CL  
UFI : 1GXE-RWA3-EDK8-996Y

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Cleaning/washing agents and additives

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Label elements**

Hazard pictograms



Signal word : Danger  
Hazard statements : Combustible liquid (H227)  
Causes skin irritation. (H315)  
Causes serious eye damage. (H318)

**Safety Data Sheet**
**Precautionary statements**

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wash hands, forearms and face thoroughly after handling. (P264) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER or doctor. (P310) Specific treatment (see supplemental first aid instruction on this label). (P321) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) In case of fire: Use ... to extinguish. (P370+P378)
Storage	: Store in a well-ventilated place. (P403)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	65 – 75	Skin Irrit. 2, H315
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	15 – 18	Eye Dam. 1, H318
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318

**Specific concentration limits:**

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
------------------	---

**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

## Safety Data Sheet

### For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL and PNEC

Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

**Safety Data Sheet**

<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

Safety Data Sheet

<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**

**Appropriate engineering controls**

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**

**Eye protection:**

Not required under suitable use as setting the cleaning liquid on the printer. However, in case of direct contact to the cleaning liquid, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**

**Skin and body protection:**

Not required under suitable use as setting the cleaning liquid on the printer. However, in case of direct contact to the cleaning liquid, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the cleaning liquid on the printer. However, in case of direct contact to the cleaning liquid, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**

**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state : Liquid

## Safety Data Sheet

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Colour	: clear.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

## 9.2. Other information

### Other safety characteristics

VOC content : ≤ 920 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

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**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

**Eco-Solvent Ink TR3-CL**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

Safety Data Sheet

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**

**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

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**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (1005/2009)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

**Dual-Use Regulation (428/2009)**

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

**VOC Directive (2004/42)**VOC content :  $\leq 920$  g/l**Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information****Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

**Safety Data Sheet**

<b>Abbreviations and acronyms:</b>	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

## Safety Data Sheet

**Full text of H- and EUH-statements:**

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

RDG Safety Data Sheet (SDS), EU GHS Ver

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 10/28/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-LK  
UFI : X2XE-6WV3-VDKS-0K9N

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger  
Contains : Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-; Formamide, N,N-diethyl-

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Hazard statements (CLP)	: H315 - Causes skin irritation. H318 - Causes serious eye damage.
Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor. P321 - Specific treatment (see supplemental first aid instruction on this label).

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Dialkylene glycol dialkyl ether	-	10 – 20	Not classified
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	12 – 15	Eye Dam. 1, H318
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	5 – 6	Eye Dam. 1, H318
Carbon Black	CAS-No.: 1333-86-4 EC-No.: 215-609-9 REACH-no: 01-2119969946-13	0 – 1	Not classified

**Specific concentration limits:**

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

## Safety Data Sheet

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

**Safety Data Sheet**
**For emergency responders**

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**
**7.1. Precautions for safe handling**

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in container of same material as original container.

**7.3. Specific end use(s)**

Inkjet Printing ink.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**DNEL and PNEC**

<b>Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects,oral	1.71 mg/kg bodyweight/day

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<b>Ethane, 1,1'-oxybis[2-ethoxy]- (112-36-7)</b>	
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day
<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt

**Safety Data Sheet**

<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

**8.2. Exposure controls**
**Appropriate engineering controls**
**Appropriate engineering controls:**

Ensure good ventilation of the work station.

**Personal protection equipment**
**Personal protective equipment:**

Wear recommended personal protective equipment.

**Eye and face protection**
**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

**Skin protection**
**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

**Respiratory protection**
**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

**Environmental exposure controls**
**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state : Liquid  
 Colour : Black.

## Safety Data Sheet

Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information****Other safety characteristics**

VOC content : < 940 g/l

**SECTION 10: Stability and reactivity****10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

**Safety Data Sheet**
**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met).  
 Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)  
 Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

**Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)**

LD50 oral rat	4970 mg/kg Source: THOMSON
LD50 oral	4970 mg/kg
LD50 dermal rat	6700000 mg/kg Source: THOMSON
LC50 Inhalation - Rat	> 5.24 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

**Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)**

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LD50 oral	5170 mg/kg
LD50 dermal rabbit	3540 mg/kg bodyweight Animal: rabbit, Animal sex: male, 95% CL: 1050 - 11800
LD50 dermal	3540 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	50 mg/l/4h

**Dialkylene glycol dialkyl ether**

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.14 mg/l air Animal: rat, Guideline: EU Method B.2 (Acute Toxicity (Inhalation))

**Carbon Black (1333-86-4)**

LD50 oral rat	> 8000 mg/kg Source: ECHA
LD50 oral	8000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:, Guideline: other:, Guideline: other:, Guideline: other:
LC50 Inhalation - Rat	> 4.6 mg/m <sup>3</sup>

Skin corrosion/irritation : Causes skin irritation.  
 pH: Not available

Serious eye damage/irritation : Causes serious eye damage.  
 pH: Not available

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).

**Safety Data Sheet**
**Carbon Black (1333-86-4)**

IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**
**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**
**Eco-Solvent Ink TR3-LK**

Persistence and degradability	No data available.
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**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

**Safety Data Sheet**

Sewage disposal recommendations : Disposal must be done according to official regulations.  
 Product/Packaging disposal recommendations : Disposal must be done according to official regulations.  
 Additional information : Do not re-use empty containers.  
 European List of Waste (LoW, EC 2000/532) : 08 03 12\* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

**14.6. Special precautions for user**
**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**Safety Data Sheet**
**SECTION 15: Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**EU-Regulations**
**REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (2024/590)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

**Council Regulation (EC) for the control of dual-use items**

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

**VOC Directive (2004/42)**

VOC content : < 940 g/l

**Explosives Precursors Regulation (EU 2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (EC 273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information**
**Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level

**Safety Data Sheet**

<b>Abbreviations and acronyms:</b>	
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

<b>Full text of H- and EUH-statements:</b>	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.

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**Full text of H- and EUH-statements:**

H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

## Safety Data Sheet

Issue date: 10/28/2025 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-RE  
UFI : E9XE-QWX9-TDK8-YM1U

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses**

Main use category : Professional use  
Function or use category : Inkjet Printing ink

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Roland DG Corporation  
1-1-2 Shinmiyakoda, Hamana-ku,  
Hamamatsu-shi, Shizuoka-ken, 431-2103 Japan  
〒431-2103  
T +81-53-484-1200

**1.4. Emergency telephone number**

No additional information available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS classification**

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. Causes serious eye damage.

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger  
Contains : Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-; Formamide, N,N-diethyl-

**Eco-Solvent Ink TR3-RE**
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Hazard statements (CLP)	: H315 - Causes skin irritation. H318 - Causes serious eye damage.
Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor. P321 - Specific treatment (see supplemental first aid instruction on this label).

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethane, 1,1'-oxybis[2-ethoxy-	CAS-No.: 112-36-7 EC-No.: 203-963-7 REACH-no: 01-2119969946-13	55 – 65	Skin Irrit. 2, H315
Formamide, N,N-diethyl-	CAS-No.: 617-84-5	5 – 15	Eye Dam. 1, H318
Dialkylene glycol dialkyl ether	-	5 – 15	Not classified
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	5 – 6	Eye Dam. 1, H318
Colouring agents	-	1 – 5	Not classified

**Specific concentration limits:**

Name	Product identifier	Specific concentration limits (%)
Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318

Full text of H- and EUH-statements: see section 16

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.

## Safety Data Sheet

First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

**5.3. Advice for firefighters**

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: Stop leak if safe to do so. Absorb spillage to prevent material damage.
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**For non-emergency personnel**

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

**For emergency responders**

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

**6.2. Environmental precautions**

Avoid release to the environment.

**Safety Data Sheet**
**6.3. Methods and material for containment and cleaning up**

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**
**7.1. Precautions for safe handling**

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep cool. Protect from sunlight.
Packaging materials	: Store always product in container of same material as original container.

**7.3. Specific end use(s)**

Inkjet Printing ink.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**DNEL and PNEC**
**Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)**
**DNEL/DMEL (Workers)**

Long-term - systemic effects, dermal	3.43 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	50.05 mg/m <sup>3</sup>

**DNEL/DMEL (General population)**

Long-term - systemic effects, oral	1.71 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5.96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.71 mg/kg bodyweight/day

**Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)**
**DNEL/DMEL (Workers)**

Acute - systemic effects, dermal	400 mg/kg bodyweight/day
Acute - systemic effects, inhalation	96 mg/m <sup>3</sup>

**Safety Data Sheet**

<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
Acute - local effects, dermal	8.35 mg/cm <sup>2</sup>
Acute - local effects, inhalation	96 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1005 mg/kg bodyweight/day
Long-term - local effects, dermal	5.65 mg/cm <sup>2</sup>
Long-term - systemic effects, inhalation	24 mg/m <sup>3</sup>
Long-term - local effects, inhalation	30.5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	48 mg/m <sup>3</sup>
Acute - systemic effects, oral	103.4 mg/kg bodyweight/day
Acute - local effects, dermal	4.173 mg/cm <sup>2</sup>
Acute - local effects, inhalation	48 mg/m <sup>3</sup>
Long-term - systemic effects, oral	50.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	12 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	502.5 mg/kg bodyweight/day
Long-term - local effects, dermal	2.823 mg/cm <sup>2</sup>
Long-term - local effects, inhalation	15.252 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	100 mg/l
PNEC aqua (marine water)	142.57 mg/l
PNEC aqua (intermittent, freshwater)	22 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	11.115 mg/kg dwt
PNEC sediment (marine water)	1.1115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	11.51 mg/kg dwt
<b>PNEC (Oral)</b>	
PNEC oral (secondary poisoning)	525.5 mg/kg food
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	199.5 mg/l
<b>Formamide, N,N-diethyl- (617-84-5)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, inhalation	4.93 mg/m <sup>3</sup>

## Safety Data Sheet

## 8.2. Exposure controls

### Appropriate engineering controls

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

### Personal protection equipment

**Personal protective equipment:**

Wear recommended personal protective equipment.

### Eye and face protection

**Eye protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses or chemical splash goggles.

### Skin protection

**Skin and body protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

**Hand protection:**

Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

### Respiratory protection

**Respiratory protection:**

In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

### Environmental exposure controls

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash hands immediately after handling the product. And wash it before reuse. Do not eat, drink or smoke during work.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: red.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 63 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.

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Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.9 – 1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information**
**Other safety characteristics**

VOC content : < 940 g/l

**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

None under recommended storage and handling conditions.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

**Ethane, 1,1'-oxybis[2-ethoxy- (112-36-7)**

LD50 oral rat	4970 mg/kg Source: THOMSON
LD50 oral	4970 mg/kg
LD50 dermal rat	6700000 mg/kg Source: THOMSON
LC50 Inhalation - Rat	> 5.24 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

**Eco-Solvent Ink TR3-RE**
**Safety Data Sheet**

<b>Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6)</b>	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LD50 oral	5170 mg/kg
LD50 dermal rabbit	3540 mg/kg bodyweight Animal: rabbit, Animal sex: male, 95% CL: 1050 - 11800
LD50 dermal	3540 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	50 mg/l/4h

<b>Dialkylene glycol dialkyl ether</b>	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.14 mg/l air Animal: rat, Guideline: EU Method B.2 (Acute Toxicity (Inhalation))

Skin corrosion/irritation	: Causes skin irritation. pH: Not available
Serious eye damage/irritation	: Causes serious eye damage. pH: Not available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

**11.2. Information on other hazards**

No additional information available

**SECTION 12: Ecological information**
**12.1. Toxicity**

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

**12.2. Persistence and degradability**

<b>Eco-Solvent Ink TR3-RE</b>	
Persistence and degradability	No data available.

**Safety Data Sheet**
**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Endocrine disrupting properties**

No additional information available

**12.7. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 08 03 12* - waste ink containing dangerous substances

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

## Safety Data Sheet

**14.6. Special precautions for user****Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

**Rail transport**

Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU-Regulations****REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

**POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

**Ozone Regulation (2024/590)**

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

**Council Regulation (EC) for the control of dual-use items**

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

**VOC Directive (2004/42)**

VOC content : &lt; 940 g/l

**Explosives Precursors Regulation (EU 2019/1148)**

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**Safety Data Sheet**
**15.2. Chemical safety assessment**

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**SECTION 16: Other information**
**Abbreviations and acronyms:**

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DNEL	Derived-No Effect Level
EC-No.	European Community number
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NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
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OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)

## Safety Data Sheet

Abbreviations and acronyms:	
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
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Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
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H319	Causes serious eye irritation.

RDG Safety Data Sheet (SDS), EU GHS Ver

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