

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

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 1/20/2025 Version: 1.0

**SECTION 1: Identification****1.1. Identification**

Product form : Mixture  
Trade name : Eco-Solvent Ink TR3-WH

**1.2. Recommended use and restrictions on use**

Recommended use : Inkjet Printing ink

**1.3. Supplier****Manufacturer**

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

**Supplier**

Roland DGA Corporation  
15363 Barranca Parkway Irvine, CA 92618 U.S.A.  
T +1-949-727-2100 - F +1-949-727-2112

**1.4. Emergency telephone number**

Emergency number : +1-949-727-2100

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS US classification**

|  |      |                           |
|--|------|---------------------------|
| Flammable liquids Category 4                 | H227 | Combustible liquid        |
| Skin corrosion/irritation Category 2         | H315 | Causes skin irritation    |
| Serious eye damage/eye irritation Category 1 | H318 | Causes serious eye damage |
| Full text of H statements : see section 16   |      |                           |

**2.2. GHS Label elements, including precautionary statements****GHS US labeling**

Hazard pictograms (GHS US) :



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

## Eco-Solvent Ink TR3-WH

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face 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).  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P370+P378 - In case of fire: Use media other than water to extinguish.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                                   | Product identifier    | %       | GHS US classification |
|--|-----------------------|---------|-----------------------|
| Ethane, 1,1'-oxybis[2-ethoxy-          | CAS-No.: 112-36-7     | 55 – 65 | Skin Irrit. 2, H315   |
| Dialkylene glycol dialkyl ether*       | CAS-No.: Trade Secret | 10 – 20 | Not classified        |
| Formamide, N,N-diethyl-                | CAS-No.: 617-84-5     | 5 – 15  | Eye Dam. 1, H318      |
| Titanium oxide (TiO <sub>2</sub> )     | CAS-No.: 13463-67-7   | 5 – 15  | Not classified        |
| Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- | CAS-No.: 143-22-6     | 4 – 5   | Eye Dam. 1, H318      |

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**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/doctor/physician if you feel unwell.  |

**4.2. Most important symptoms and effects (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. Immediate medical attention and special treatment, if necessary**

Treat symptomatically.

**SECTION 5: Fire-fighting measures****5.1. Suitable (and unsuitable) extinguishing media**

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

**5.2. Specific hazards arising from the chemical**

|  |                                |
|--|--------------------------------|
| Fire hazard                                      | : Combustible liquid.          |
| Explosion hazard                                 | : No direct explosion hazard.  |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |

**5.3. Special protective equipment and precautions for fire-fighters**

|                                |   |
|--------------------------------|---|
| 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. |
|------------------|---|

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

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**6.1.1. For non-emergency personnel**

- |                      |   |
|----------------------|---|
| Protective equipment | : Wear recommended personal protective equipment.   |
| Emergency procedures | : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. |

**6.1.2. 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, if possible without risk. |
| 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. |
| 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  | : Store in a well-ventilated place. Keep cool.                              |
| Packaging materials | : Store always product in container of same material as original container. |

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Titanium oxide (TiO<sub>2</sub>) (13463-67-7)****USA - ACGIH - Occupational Exposure Limits**

|            |                  |
|------------|------------------|
| Local name | Titanium dioxide |
|------------|------------------|

## Eco-Solvent Ink TR3-WH

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

|                      |  |
|----------------------|--|
| ACGIH OEL TWA        | 0.2 mg/m <sup>3</sup> (Nanoscale particles. R - Repirable particulate matter)<br>2.5 mg/m <sup>3</sup> (Finescale particles. R - Repirable particulate matter) |
| Remark (ACGIH)       | TLV® Basis: LRT irr; pneumoconiosis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)  |
| Regulatory reference | ACGIH 2024   |

#### USA - OSHA - Occupational Exposure Limits

|                                |                               |
|--------------------------------|-------------------------------|
| Local name                     | Titanium dioxide (Total dust) |
| OSHA PEL TWA                   | 15 mg/m <sup>3</sup>          |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1      |

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Personal protective equipment:

Wear recommended personal protective equipment.

##### 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.

##### 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 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.

##### 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).

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Color : white  
Odor : characteristic  
Odor threshold : No data available

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

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

|   |                     |
|---|---------------------|
| pH  | : No data available |
| Melting point                                   | : Not applicable    |
| Freezing point                                  | : No data available |
| Boiling point                                   | : No data available |
| Flash point                                     | : 63 °C             |
| Relative evaporation rate (butyl acetate=1)     | : No data available |
| Flammability (solid, gas)                       | : Not applicable.   |
| Vapor pressure                                  | : No data available |
| Relative vapor density at 20°C                  | : No data available |
| Relative density                                | : 1 – 1.1           |
| Solubility                                      | : Soluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature                       | : No data available |
| Decomposition temperature                       | : No data available |
| Viscosity, kinematic                            | : No data available |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : No data available |
| Explosive properties                            | : No data available |
| Oxidizing properties                            | : No data available |

**9.2. Other information**

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**

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

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

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

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

|                                   |  |
|-----------------------------------|--|
| Acute toxicity (oral)             | : Not classified   |
| Acute toxicity (dermal)           | : Not classified   |
| Acute toxicity (inhalation)       | : Not classified   |
| Skin corrosion/irritation         | : Causes skin irritation.  |
| Serious eye damage/irritation     | : Causes serious eye damage.   |
| Respiratory or skin sensitization | : Not classified   |
| Germ cell mutagenicity            | : Not classified   |
| 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  |
| STOT-single exposure                | : Not classified  |
| STOT-repeated exposure              | : Not classified  |
| Aspiration hazard                   | : Not classified  |
| Viscosity, kinematic                | : No data available   |
| 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.   |

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

|                   |  |
|-------------------|--|
| Ecology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |
|-------------------|--|

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

|                               |                    |
|-------------------------------|--------------------|
| Persistence and degradability | No data available. |
|-------------------------------|--------------------|

**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**12.5. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations****13.1. Disposal 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.   |

**SECTION 14: Transport information**

In accordance with DOT / TDG / IMDG / IATA

**14.1. UN number**

|               |                  |
|---------------|------------------|
| UN-No. (DOT)  | : Not applicable |
| UN-No. (TDG)  | : Not applicable |
| UN-No. (IMDG) | : Not regulated  |
| UN-No. (IATA) | : Not regulated  |

**14.2. UN proper shipping name**

|                             |                  |
|-----------------------------|------------------|
| Proper Shipping Name (DOT)  | : Not applicable |
| Proper Shipping Name (TDG)  | : Not applicable |
| Proper Shipping Name (IMDG) | : Not regulated  |
| Proper Shipping Name (IATA) | : Not regulated  |

**14.3. Transport hazard class(es)**

|                                  |                  |
|----------------------------------|------------------|
| <b>DOT</b>                       |                  |
| Transport hazard class(es) (DOT) | : Not applicable |

|                                  |                  |
|----------------------------------|------------------|
| <b>TDG</b>                       |                  |
| Transport hazard class(es) (TDG) | : Not applicable |

|                                   |                 |
|-----------------------------------|-----------------|
| <b>IMDG</b>                       |                 |
| Transport hazard class(es) (IMDG) | : Not regulated |

|                                   |                 |
|-----------------------------------|-----------------|
| <b>IATA</b>                       |                 |
| Transport hazard class(es) (IATA) | : Not regulated |

**14.4. Packing group**

|                     |                  |
|---------------------|------------------|
| Packing group (DOT) | : Not applicable |
| Packing group (TDG) | : Not applicable |



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

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing group (IMDG) : Not regulated  
Packing group (IATA) : Not regulated

**14.5. Environmental hazards**

Other information : No supplementary information available.

**14.6. Special precautions for user**

**DOT**  
Not applicable

**TDG**  
Not applicable

**IMDG**  
Not regulated

**IATA**  
Not regulated

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15: Regulatory information****15.1. US Federal regulations**

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S

|                               |                  |          |
|-------------------------------|------------------|----------|
| Ethane, 1,1'-oxybis[2-ethoxy- | CAS-No. 112-36-7 | 55 – 65% |
|-------------------------------|------------------|----------|

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

|                               |                  |          |
|-------------------------------|------------------|----------|
| Ethane, 1,1'-oxybis[2-ethoxy- | CAS-No. 112-36-7 | 55 – 65% |
|-------------------------------|------------------|----------|

|  |                  |        |
|--|------------------|--------|
| Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- | CAS-No. 143-22-6 | 4 – 5% |
|--|------------------|--------|

|                                 |         |          |
|---------------------------------|---------|----------|
| Dialkylene glycol dialkyl ether | CAS-No. | 10 – 20% |
|---------------------------------|---------|----------|

**15.2. International regulations****CANADA**

No additional information available

**National regulations**

No additional information available

## Eco-Solvent Ink TR3-WH

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## 15.3. US State regulations

**WARNING:**

This product can expose you to Ethylbenzene, which is known to the State of California to cause cancer, and Ethylene glycol monoethyl ether, Ethylene glycol monomethyl ether, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## Full text of hazard classes and H-statements

|      |                           |
|------|---------------------------|
| H227 | Combustible liquid        |
| H315 | Causes skin irritation    |
| H318 | Causes serious eye damage |

NFPA health hazard

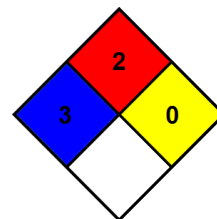
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



RDG Safety Data Sheet (SDS), USA

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.