

# Safety Data Sheet

Revision: Version US\_2.0

US-WH

Revision Date: Jan-9-2024

## 1. Product and Company Identification

**Product name:** US-WH

**Use of the product:** Inkjet Printing

**Manufacturer:**

Manufacturer's name: Roland DG Corporation

Address: 1-1-2 Shinmiyakoda, Hamana-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103

Phone: + 81-53-484-1224

FAX: + 81-53-484-1226

**Importer/Supplier:**

Supplier's name: Roland DGA Corporation

Address: 15363 Barranca Parkway Irvine, CA 92618 U.S.A.

Phone: +1-949-727-2100

FAX: +1-949-727-2112

E-mail:

**Emergency telephone:** +1-949-727-2100

**Date of issue:** Jan-9-2024

## 2. Hazard identification

### 2.1 Emergency Overview:

**Appearance and odor:**

White Liquid and Characteristic odour

**Classification according to GHS.**

Skin corrosion/irritation

Category 2

Serious eye damage/eye irritation

Category 1

Sensitization (Skin)

Category 1

Reproductive toxicity

Category 1B

Specific target organ toxicity (Repeated exposure)

Category 1

Hazardous to the aquatic environment (Chronic Hazard)

Category 2

**GHS label elements, including precautionary statements**
**Pictogram(s)**

**Signal Word:**

Danger

**Hazard Statement:**

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects.

**Precautionary statements — Prevention:**

# Safety Data Sheet

US-WH

Revision: Version US\_2.0

Revision Date: Jan-9-2024

Obtain special instructions before use.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.

## Precautionary statements — Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice/attention.

## 2.2. OSHA regulatory status

This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

## 2.3. Other hazards

Potential Health Effects:

Eyes: Causes severe eye injury which may persist for several days.  
Skin: Contact with skin may cause irritation, swelling or redness, allergic sensitization.  
Inhalation: Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility and irritate nose, throat/respiratory system.  
Ingestion: May cause injury of mouth, throat, and stomach.  
Chronic Health Hazards: Repeated skin contact may cause a persistent irritation or dermatitis.  
Carcinogenicity: This product contains Titanium dioxide. IARC evaluated printing ink as a Group 3. (IARC Group 3: Not t classifiable as to carcinogenicity to humans)  
Others: No information.

See section 11 for more information.

## 2.4. Potential environmental effects

See section 12 for Ecological information.

## 3. Composition/information on ingredients

Chemical nature: mixture

Composition	CAS No.	% By Weight	Classification (HCS) Hazard Communication Standard
Titanium dioxide	13463-67-7	10-20	Not classified as hazardous
2-Propenoic acid, 2-phenoxyethyl ester	48145-04-6	25-50	Skin Sens. 1A: H317 Repr. 2: H361 Aquatic Chronic 2: H411
Dipropyleneglycol diacrylate	57472-68-1	10-20	Skin Irrit. 2: H315 Eye Damage 1: H318 Skin Sens. 1: H317
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	10-20	Acute Tox. 4: H302 Acute Tox. 4: H312 Eye Irrit. 2A: H319 Skin Sens. 1B: H317 STOT Rep. Exp. 1: H372

# Safety Data Sheet

Revision: Version US\_2.0

US-WH

Revision Date: Jan-9-2024

2-hydroxy-2-methylpropiophenone	7473-98-5	1-5	Acute Tox. 4: H302
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	3-5	Repr. 1B: H360 Skin Sens.1: H317
2-[[[(butylamino)carbonyl]oxy]ethyl acrylate	63225-53-6	1-5	Acute Tox. 3: H331 Skin Sens. 1A: H317

## 4. First aid measures

### 4.1. First aid procedures

- Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.
- Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.
- Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

### 4.2. Note to physicians

May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

## 5. Firefighting measures

### 5.1. Flammable properties:

Incombustible liquid under Hazard Communication Standard (HCS, U.S.A).

Flash Point: > 201.2deg.F

### 5.2. Extinguishing media

- Suitable extinguishing media: Dry chemical, Foam, Carbon dioxide, Dry sand, Loaded stream in spray.
- Unsuitable extinguishing media: High-pressure water jet

### 5.3. Protection of fire fighters

- Special hazards arising from the substance or mixture
- Hazardous decomposition products: Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.
- Protective equipment and precautions for firefighters
- Wear special chemical protective clothing and positive pressure self-contained breathing apparatus(SCBA).
- Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.
- Decontaminate or discard any clothing that may contain chemical residues.
- Applying direct water may be dangerous because fire may expand to surroundings.

## 6. Accidental release measures

### General:

Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

### 6.1. Personal precautions

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

# Safety Data Sheet

US-WH

Revision: Version US\_2.0

Revision Date: Jan-9-2024

## 6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

## 6.3. Methods for containment

Dike spilled product.

## 6.4. Methods for Clean-up

Sweep up material and dispose as waste following local regulations.

## 6.5. Other information

No information

## 6.6. Spill or leak statements by type of chemical

Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapors and dilute spill to a non-flammable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

## 7. Handling and storage

### 7.1. Handling

Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink.

### 7.2. Storage

Keep containers tightly closed. Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with metals, amines, free radical initiators, oxidising agents.

## 8. Exposure controls/ personal protection

### 8.1. Exposure Guidelines

Occupational Exposure Limits:

Titanium dioxide (CAS 13463-67-7):

[OSHA] PEL: TWA 15 mg/m<sup>3</sup>

[California Code of Regulations, Title 8] PEL 10 mg/m<sup>3</sup> (Total dust) 5 mg/m<sup>3</sup> (Respirable fraction)

### 8.2. Engineering controls

Provide general and/or local exhaust ventilation.

### 8.3. Personal protective equipment (PPE)

#### Eye protection:

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

#### Hand protection:

Employee must wear appropriate protective impervious gloves to prevent contact with the ink. Recommended Chemical Protective Gloves are ethylene vinyl alcohol (EVA) Gloves and Lamine gloves. Lamine gloves are made by cutting and then heat-sealing patterns of various hand sizes from laminated sheets of EVA sealed between layers of polyethylene.

#### Skin protection:

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

# Safety Data Sheet

US-WH

Revision: Version US\_2.0

Revision Date: Jan-9-2024

ink, wear protective clothing.

**Respiratory protection:**

In case ventilation is insufficient, employee must use NIOSH approved air purifying respiratory equipment. Use a half facepiece respirator (with goggles) or full face-piece respirator (without goggles) filtered with organic vapor cartridge. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self contained air supply. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**General hygiene measures:**

Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

## 9. Physical and chemical properties

appearance:	White Liquid
odor:	Characteristic odour
odor threshold:	Not defined
pH:	Not applicable
melting point/freezing point:	No data available
initial boiling point and boiling range:	No data available
flash point:	> 201.2deg.F
evaporation rate:	No data available
flammability (solid, gas):	Not applicable
vapor pressure:	No data available
vapor density:	No data available
specific gravity or relative density:	1.2-1.3
solubility in water:	Slightly soluble
partition coefficient: n-octanol/water:	No data available
auto-ignition temperature:	No data available
decomposition temperature:	No data available
volatile organic compounds (VOC) content:	499 g/L

## 10. Stability and Reactivity

**10.1 Reactivity:**

High temperatures and UV light may cause rapid polymerization.

**10.2. Possibility of hazardous reactions:**

Not expected.

**10.3. Chemical stability:**

Stable under normal temperature.

**10.4 Conditions to avoid:**

Elevated temperatures/heat, UV light, when not in use.

**10.5 Incompatible materials:**

Avoid contact with acids, amines, free radical initiators, oxidizing agents.

**10.6 Hazardous decomposition products:**

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

# Safety Data Sheet

US-WH

Revision: Version US\_2.0

Revision Date: Jan-9-2024

## 11. Toxicological information

### Acute toxicity:

1-vinylhexahydro-2H-azepin-2-one

LD50 (oral) : 1114mg/kg, LD50 (dermal): 1700mg/kg, LD50 (Inhal.): no data available

2-hydroxy-2-methylpropiophenone

LD50 (oral) : no data available, LD50 (dermal): no data available, LD50 (Inhal.): no data available

2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

LD50 (oral) : no data available, LD50 (dermal): no data available, LD50 (Inhal.): no data available

### Serious eye damage/eye irritation:

Causes serious eye damage.

- Dipropylene glycol diacrylate

Causes serious eye irritation.

- 1-vinylhexahydro-2H-azepin-2-one

### Skin corrosion/irritation:

Causes skin irritation.

- Dipropylene glycol diacrylate

### Respiratory or skin sensitisation:

May cause an allergic skin reaction.

- 2-Propenoic acid, 2-phenoxyethyl ester
- Dipropylene glycol diacrylate
- 1-vinylhexahydro-2H-azepin-2-one
- Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
- 2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

### Germ cell mutagenicity:

no data available.

### Reproductive toxicity:

May damage fertility or the unborn child.

- Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Suspected of damaging fertility or the unborn child.

- 2-Propenoic acid, 2-phenoxyethyl ester

### Carcinogenicity:

This product contains Titanium dioxide.

IARC evaluated printing ink as a Group 3.

(IARC Group 3: Not classifiable as to carcinogenicity to humans)

### Specific target organ toxicity - single exposure, (STOT-SE):

no data available.

### Specific target organ toxicity - repeat exposure, (STOT-RE):

Causes damage to organs through prolonged or repeated exposure.

- 1-vinylhexahydro-2H-azepin-2-one

### Aspiration hazard:

no data available.

# Safety Data Sheet

US-WH

Revision: Version US\_2.0

Revision Date: Jan-9-2024

## 12. Ecological information

**Ecotoxicity:**

Toxic to aquatic life with long lasting effects.  
• 2-Propenoic acid, 2-phenoxyethyl ester

**Persistence/Degradability:**

No data available

**Bioaccumulation/Accumulation:**

No data available

**Mobility in environment media:**

No data available

**Other adverse effects:**

No data available

## 13. Disposal considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations. Do not flush to surface water or sanitary sewer system.

## 14. Transport information

**14.1 UN Class/UN Number**

ADR/ADG/DOT, IMDG, or IATA : 3082

**14.2 UN proper shipping name**

ADR/ADG/DOT, IMDG, or IATA : Environmentall hazardous substance, liquid, n.o.s.

**14.3 Transport hazard class(es)**

ADR/ADG/DOT, IMDG, or IATA : 9

**14.4 Packing group**

ADR/ADG/DOT, IMDG, or IATA : III

**14.5 Environmental hazards**

ADR/ADG/DOT, IMDG, or IATA : Environmentally hazardous substance, liquid, n.o.s.

**14.6. Special precautions for user**

ADR/ADG/DOT, IMDG, or IATA : Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not regulated

## 15. Regulatory Information

**Federal Regulations****Toxic Substance Control Act (TSCA):**

All components of this product are listed on the TSCA Inventory.

# Safety Data Sheet

US-WH

Revision: Version US\_2.0

Revision Date: Jan-9-2024

## SARA Title III Rules

### Section 313/312 Hazard Classes

- |  |  |
|--|--|
| <input type="checkbox"/> Explosive                                       | <input type="checkbox"/> Acute toxicity (any route of exposure)                                  |
| <input type="checkbox"/> Flammable (gases, aerosols, liquids, or solids) | <input checked="" type="checkbox"/> Skin corrosion or irritation                                 |
| <input type="checkbox"/> Oxidizer (liquid, solid, or gas)                | <input checked="" type="checkbox"/> Serious eye damage or eye irritation                         |
| <input type="checkbox"/> Self-reactive                                   | <input checked="" type="checkbox"/> Respiratory or skin sensitization                            |
| <input type="checkbox"/> Pyrophoric (liquid or solid)                    | <input type="checkbox"/> Germ cell mutagenicity  |
| <input type="checkbox"/> Pyrophoric Gas                                  | <input type="checkbox"/> Carcinogenicity   |
| <input type="checkbox"/> Self-heating                                    | <input checked="" type="checkbox"/> Reproductive toxicity  |
| <input type="checkbox"/> Organic peroxide                                | <input checked="" type="checkbox"/> Specific target organ toxicity (single or repeated exposure) |
| <input type="checkbox"/> Corrosive to metal                              | <input type="checkbox"/> Aspiration hazard   |
| <input type="checkbox"/> Gas under pressure (compressed gas)             | <input type="checkbox"/> Simple Asphyxiant   |
| <input type="checkbox"/> In contact with water emits flammable gas       | <input type="checkbox"/> Hazard not otherwise classified   |
| <input type="checkbox"/> Combustible Dust                                |  |
| <input type="checkbox"/> Hazard not otherwise classified                 |  |

### Section 302 Extremely Hazardous Substances (EHS)

None of the ingredients are listed.

### Section 313 Toxic Chemicals

Glycol Ethers (N230)

### CERCLA Hazardous Substances

Glycol Ethers (N230) RQ†

† - There is no RQ assigned to this broad class, although the class is a CERCLA hazardous substances. Refer to 50 Federal Register 13456 (April 4, 1985).

### RCRA (Hazardous waste code)

None Assigned

## State Regulations

### California Proposition 65:

None of the ingredients are listed.

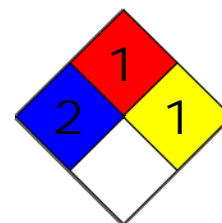
## 16. Other information

### NFPA Rating (NFPA 704):

NFPA Health Hazard: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA Flammability: 1 - Must be preheated before ignition can occur.

NFPA Instability: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination



## Safety Data Sheet

Revision: Version US\_2.0

US-WH

Revision Date: Jan-9-2024

---

with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.