

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 10/28/2024 Version: 4.0

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

Product form : Mixture
Trade name : TrueVIS INK, TR2-GR
UFI : GAPE-9WT1-GDK6-AXP0

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

Supplier

Roland DG EMEA N.V.
Bell Telephonelaan 2G, 2440 Geel, Belgium
T +32 (0) 14 57 59 11

1.4. Emergency telephone number

| Country/Area | Organisation/Company | Emergency number | Comment |
|----------------|--|---|------------------|
| Ireland | Poisons Information Centre of Ireland | +353 18 37 99 64 (medical professionals) +353 18 09 21 66 (public) | |
| Malta | Malta Competition and Consumer Affairs Authority (MCCAA) | +356 2395 2000 1774 helpline for accidental poisoning | |
| United Kingdom | Emergency number England | 999 NHS 111 | or call a doctor |

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes skin irritation. Causes serious eye damage.

TrueVIS INK, TR2-GR

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

Signal word (CLP)

: Danger

Contains

: 2(3H)-Furanone, dihydro-; Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-

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

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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 |
| 2(3H)-Furanone, dihydro- | CAS-No.: 96-48-0 REACH-no: 01-2119471839-21 | < 20 | Acute Tox. 4 (Oral), H302 (ATE=800 mg/kg bodyweight) Eye Dam. 1, H318 STOT SE 3, H336 |
| Dialkylene glycol dialkyl ether | - | 10 – 20 | 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 | 1 – 10 | Eye Dam. 1, H318 |
| Resin | - | 1 – 10 | Not classified |

TrueVIS INK, TR2-GR
Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-----------------|--------------------|-------|---|
| 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

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. |

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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.

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

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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 ³ |

DNEL/DMEL (General population)

| | |
|--|---------------------------|
| Long-term - systemic effects, oral | 1.71 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 5.96 mg/m ³ |
| 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 ³ |
| Acute - local effects, dermal | 8.35 mg/cm ² |
| Acute - local effects, inhalation | 96 mg/m ³ |
| Long-term - systemic effects, dermal | 1005 mg/kg bodyweight/day |
| Long-term - local effects, dermal | 5.65 mg/cm ² |
| Long-term - systemic effects, inhalation | 24 mg/m ³ |
| Long-term - local effects, inhalation | 30.5 mg/m ³ |

DNEL/DMEL (General population)

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

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]- (143-22-6) | |
|--|------------------|
| PNEC (Water) | |
| PNEC aqua (freshwater) | 100 mg/l |
| PNEC aqua (marine water) | 142.57 mg/l |
| PNEC aqua (intermittent, freshwater) | 22 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 11.115 mg/kg dwt |
| PNEC sediment (marine water) | 1.1115 mg/kg dwt |
| PNEC (Soil) | |
| PNEC soil | 11.51 mg/kg dwt |
| PNEC (Oral) | |
| PNEC oral (secondary poisoning) | 525.5 mg/kg food |
| PNEC (STP) | |
| PNEC sewage treatment plant | 199.5 mg/l |

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.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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. |
| Odour | : characteristic. |
| Odour threshold | : Not available |
| Melting point | : Not applicable |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Not available |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : > 71 °C |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : Not available |
| Viscosity, kinematic | : Not available |
| Solubility | : Water solubility. |
| 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 : ≤ 950 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.

TrueVIS INK, TR2-GR
Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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)

TrueVIS INK, TR2-GR

| | |
|---------------------------------|-----------------------|
| LD50 oral | 1582 mg/kg bodyweight |
| LC50 Inhalation - Rat (Vapours) | 5.1 mg/l/4h |

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).

2(3H)-Furanone, dihydro- (96-48-0)

| | |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

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)

TrueVIS INK, TR2-GR
Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.2. Persistence and degradability
TrueVIS INK, TR2-GR

| | |
|-------------------------------|--------------------|
| 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

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 |
|---|---------------|---------------|---------------|---------------|
| 14.1. UN number or ID number | | | | |
| Not regulated for transport | | | | |
| 14.2. UN proper shipping name | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| ADR | IMDG | IATA | ADN | RID |
|--|---------------|---------------|---------------|---------------|
| 14.5. Environmental hazards | | | | |
| 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 : ≤ 950 g/l

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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 |

TrueVIS INK, TR2-GR

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| 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: | |
|-------------------------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Narcosis |

RDG Safety Data Sheet (SDS), EU

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.