

Revision date: 09-Feb-2016 Version: 1 Print date: 10-Feb-2016

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-CY

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
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Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
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2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - < 10 Wt %

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product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	< 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
 Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7
 Personal protection equipment: see section 8
 Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Use only in well-ventilated areas.
 Handle and open container with care.
 It is recommended to design all work processes always so that the following is excluded:
 Skin contact, Eye contact, Inhalation
 When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.
 Conditions to avoid: Protect from sunlight.
 Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: violet

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	not determined			
Melting point/freezing point	not determined			
Freezing point	not determined			
Initial boiling point and boiling range	not determined			
Decomposition temperature (°C):	not determined			
Flash point	71 °C			
Evaporation rate	not determined			
Ignition temperature in °C	not determined			
Upper/lower flammability or explosive limits	not determined			
Vapour pressure	not determined			
Vapour density	not determined			
Density	not determined			
Bulk density	not determined			

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parameter		at °C	method	Remark
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

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SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
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*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

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16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

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16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

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The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
Telefon: + 81-53-484-1224
Telefax: + 81-53-484-1226

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-MG

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 23: Electricity, steam, gas water supply and sewage treatment

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

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Telephone: +32 14 57 59 11

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1.4. Emergency telephone number

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24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
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Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
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2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - < 10 Wt %

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	< 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
 Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7
 Personal protection equipment: see section 8
 Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Use only in well-ventilated areas.
 Handle and open container with care.
 It is recommended to design all work processes always so that the following is excluded:
 Skin contact, Eye contact, Inhalation
 When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.
 Conditions to avoid: Protect from sunlight.
 Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: red

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	not determined			
Melting point/freezing point	not determined			
Freezing point	not determined			
Initial boiling point and boiling range	not determined			
Decomposition temperature (°C):	not determined			
Flash point	71 °C			
Evaporation rate	not determined			
Ignition temperature in °C	not determined			
Upper/lower flammability or explosive limits	not determined			
Vapour pressure	not determined			
Vapour density	not determined			
Density	not determined			
Bulk density	not determined			

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parameter		at °C	method	Remark
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

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SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
------------	--

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

-

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

Revision date: 10-Feb-2016 **Version:** 1 **Print date:** 10-Feb-2016

16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

-

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
Telefon: + 81-53-484-1224
Telefax: + 81-53-484-1226

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-YE

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
--------	---

Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
--------	---

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - < 10 Wt %

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product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	< 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Protective measures****Advices on safe handling:**

Use only in well-ventilated areas.

Handle and open container with care.

It is recommended to design all work processes always so that the following is excluded:

Skin contact, Eye contact, Inhalation

When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions:**

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.

Conditions to avoid: Protect from sunlight.

Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

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

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Occupational exposure limit values**

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: yellow

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	<i>not determined</i>			
Melting point/freezing point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	71 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			

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parameter		at °C	method	Remark
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
------------	--

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

-

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

Revision date: 10-Feb-2016 **Version:** 1 **Print date:** 10-Feb-2016

16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

-

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
Telefon: + 81-53-484-1224
Telefax: + 81-53-484-1226

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-BK

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
--------	---

Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
--------	---

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - < 10 Wt %
CAS No.: 1333-86-4 EC No.: 215-609-9	Carbon black	> 1 - < 10 Wt %

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product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	< 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Protective measures****Advices on safe handling:**

Use only in well-ventilated areas.

Handle and open container with care.

It is recommended to design all work processes always so that the following is excluded:

Skin contact, Eye contact, Inhalation

When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions:**

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.

Conditions to avoid: Protect from sunlight.

Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

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

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Occupational exposure limit values**

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VLA (FR)	Carbon black CAS No.: 1333-86-4	① 3.5 mg/m ³
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
Carbon black CAS No.: 1333-86-4	2 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: black

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	<i>not determined</i>			
Melting point/freezing point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	71 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			

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parameter		at °C	method	Remark
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

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SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

There are no data available on the mixture itself.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
------------	--

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

-

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

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16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

-

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
Telefon: + 81-53-484-1224
Telefax: + 81-53-484-1226

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-LC

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

Use of the substance/mixture:

Identified uses: Inkjet Printing
for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
--------	---

Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
--------	---

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - < 10 Wt %

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	0 - < 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Protective measures****Advices on safe handling:**

Use only in well-ventilated areas.

Handle and open container with care.

It is recommended to design all work processes always so that the following is excluded:

Skin contact, Eye contact, Inhalation

When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions:**

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.

Conditions to avoid: Protect from sunlight.

Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

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

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Occupational exposure limit values**

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: light violet

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	<i>not determined</i>			
Melting point/freezing point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	71 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			

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parameter		at °C	method	Remark
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

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SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Bioconcentration factor (BCF):

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
------------	--

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

-

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

Revision date: 10-Feb-2016 **Version:** 1 **Print date:** 10-Feb-2016

16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

-

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
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JAPAN
Telefon: + 81-53-484-1224
Telefax: + 81-53-484-1226

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-LM

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
--------	---

Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
--------	---

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - 10 Wt %

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product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	< 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Protective measures****Advices on safe handling:**

Use only in well-ventilated areas.

Handle and open container with care.

It is recommended to design all work processes always so that the following is excluded:

Skin contact, Eye contact, Inhalation

When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions:**

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.

Conditions to avoid: Protect from sunlight.

Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

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

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Occupational exposure limit values**

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: red violet

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	<i>not determined</i>			
Melting point/freezing point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	71 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			

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parameter		at °C	method	Remark
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
------------	--

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

-

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

Revision date: 10-Feb-2016 **Version:** 1 **Print date:** 10-Feb-2016

16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

-

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
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Telefax: + 81-53-484-1226

Revision date: 10-Feb-2016 Version: 1 Print date: 10-Feb-2016

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-LK

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:

γ-butyrolactone; 2-(2-(2-butoxyethoxy)ethoxy)ethanol; methyl methacrylate

hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

Supplemental Hazard information (EU)

EUH208	Contains methyl methacrylate. May produce an allergic reaction.
--------	---

Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response

P302 + P352.1	IF ON SKIN: Wash with plenty of soap and 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.
P310.2	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statements Disposal

P501.1	Dispose of contents/container to industrial incineration plant.
--------	---

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.



SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 ⚠ Warning H315	> 65 - < 75 Wt %
CAS No.: 96-48-0 EC No.: 202-509-5	γ-butyrolactone Eye Dam. 1, STOT SE 3, Acute Tox. 4 ⚠ ⚠ Danger H302-H318-H336	> 5 - < 15 Wt %
CAS No.: 143-22-6 EC No.: 205-592-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol Eye Dam. 1 ⚠ Danger H318	> 1 - < 10 Wt %
CAS No.: 1333-86-4 EC No.: 215-609-9	Carbon black	< 1 Wt %

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product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 80-62-6 EC No.: 201-297-1	methyl methacrylate STOT SE 3, Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1   Danger H225-H315-H317-H335	< 0.3 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.

Wear personal protection equipment.

See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Protective measures****Advices on safe handling:**

Use only in well-ventilated areas.

Handle and open container with care.

It is recommended to design all work processes always so that the following is excluded:

Skin contact, Eye contact, Inhalation

When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions:**

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.

Conditions to avoid: Protect from sunlight.

Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

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

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Occupational exposure limit values**

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
VLA (FR)	Carbon black CAS No.: 1333-86-4	① 3.5 mg/m ³
VRC (FR)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (205 mg/m ³) ② 100 ppm (410 mg/m ³)
TRGS 900 (DE)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (210 mg/m ³) ② 100 ppm (420 mg/m ³)
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
NL	methyl methacrylate CAS No.: 80-62-6	① 205 mg/m ³ ② 410 mg/m ³

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8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	958 mg/m ³	① DNEL worker ② DNEL acute inhalative (systemic)
γ-butyrolactone CAS No.: 96-48-0	130 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
Carbon black CAS No.: 1333-86-4	2 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

Other protection measures:

Body protection: not required.

General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: black

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	<i>not determined</i>			
Melting point/freezing point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	71 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			

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parameter		at °C	method	Remark
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/ water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
96-48-0	γ -butyrolactone	LD₅₀ oral: =1,580 mg/kg LD₅₀ dermal: =5,600 mg/kg
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol	LD₅₀ oral: >5,000 mg/kg

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

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SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

There are no data available on the mixture itself.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
------------	--

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

 **[DE] National regulations**

Restrictions of occupation

22 JArbSchG.
 4 MuSchRiV.
 5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

-

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Dam. 1</i>)	H318: Causes serious eye damage.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

16.6. Training advice

No data available

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16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

-

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

Importer/Only Representative :
Roland DG Benelux NV

Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
Telefon: + 81-53-484-1224
Telefax: + 81-53-484-1226

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

TrueVIS INK, TR-CL

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

Use of the substance/mixture:

Identified uses: Inkjet Printing

for professional use only

Uses advised against: Do not use for private purposes (household).

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Product Categories [PC]

PC 18: Ink and toners

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV

Bell-Telephonelaan 2G

B-2440 Geel

Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +32 70 245 245 (Centre Antipoisons Belge - Belgisch Antigifcentrum, BE), +33 1 40 05 48 48 (centre antipoison et de toxicovigilance, Paris, FR), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

24h: +49 228 19240 (Giftnotruf Bonn) , +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.

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2.2. Label elements

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

Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning

hazard statements for health hazards	
H315	Causes skin irritation.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P280.5	Wear protective gloves.

Precautionary statements Response	
P302 + P352.1	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 112-36-7 EC No.: 203-963-7 REACH No.: 01-2119969946-13-0000	bis(2-ethoxyethyl) ether Skin Irrit. 2 Warning H315	> 35 - < 45 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult physician immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion:

Do NOT induce vomiting. Consult physician immediately.

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

Causes serious eye damage.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry extinguishing powder, Foam, Carbon dioxide (CO₂), Dry sand, Water

Unsuitable extinguishing media:

High power water jet

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Provide adequate ventilation.
Wear personal protection equipment.
See protective measures under point 7 and 8.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up:

The contaminated area should be cleaned up immediately with: Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information

No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Use only in well-ventilated areas.
Handle and open container with care.
It is recommended to design all work processes always so that the following is excluded:
Skin contact, Eye contact, Inhalation
When using do not eat, drink, smoke, sniff.

Fire prevent measures:

Keep away from sources of ignition. - No smoking.

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7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Keep only in original container.

Conditions to avoid: Protect from sunlight.

Protect against: Frost, Heat

Hints on storage assembly:

Do not store together with: Oxidising agent

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
IOELV (EU)	(2-methoxymethylethoxy)propanol CAS No.: 34590-94-8	① 50 ppm (308 mg/m ³) ⑤ (May be absorbed through the skin.)
NL	(2-methoxymethylethoxy)propanol CAS No.: 34590-94-8	① 300 mg/m ³
TRGS 900 (DE)	(2-methoxymethylethoxy)propanol CAS No.: 34590-94-8	① 50 ppm (310 mg/m ³) ② 50 ppm (310 mg/m ³)
VRC (FR)	(2-methoxymethylethoxy)propanol CAS No.: 34590-94-8	① 50 ppm (308 mg/m ³) ⑤ (Peut être absorbé par la peau.)

8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
bis(2-ethoxyethyl) ether CAS No.: 112-36-7	50.05 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Hand protection: Tested protective gloves must be worn (DIN EN 374)

Suitable material: Butyl caoutchouc (butyl rubber)

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection:

Respiratory protection necessary at: insufficient ventilation, insufficient exhaust.

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Other protection measures:

Body protection: not required.
 General health and safety measures: Thorough skin-cleansing after handling the product. Wash contaminated clothing prior to re-use. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

Discharge into the environment must be avoided.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

Colour: clear

Odour: characteristic

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	method	Remark
pH	<i>not determined</i>			
Melting point/freezing point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	76 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Frost, Heat

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

There are no data available on the mixture itself.

Acute dermal toxicity:

There are no data available on the mixture itself.

Acute inhalation toxicity:

There are no data available on the mixture itself.

Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

There are no data available on the mixture itself.

Respiratory or skin sensitisation:

There are no data available on the mixture itself.

Germ cell mutagenicity:

There are no data available on the mixture itself.

Carcinogenicity:

There are no data available on the mixture itself.

Reproductive toxicity:

There are no data available on the mixture itself.

STOT-single exposure:

There are no data available on the mixture itself.

STOT-repeated exposure:

There are no data available on the mixture itself.

Aspiration hazard:

There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

There are no data available on the mixture itself.

12.2. Persistence and degradability

Additional information:

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to EAKV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances
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*: Evidence for disposal must be provided.

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Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

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

not relevant

Additional information:

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

22 JArbSchG.

4 MuSchRiV.

5 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

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16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

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16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H315	Causes skin irritation.

16.6. Training advice

No data available

16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

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The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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