

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



ROTOSTAR UV 166 876 FLEXO INK

Version 3.0 Revision Date: 09.11.2018 SDS Number: 102000029042 Print Date: 19.11.2018
Date of first issue: 04.07.2018

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

1.1 Product identifier

Trade name : ROTOSTAR UV 166 876 FLEXO INK
Product code : 023656U10

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

This information is not available.

1.3 Details of the supplier of the safety data sheet

Company : ECKART GmbH
Guentersthal 4
91235 Hartenstein

Telephone : +499152770

Telefax : +499152777008

E-mail address of person responsible for the SDS : msds.eckart@altana.com

1.4 Emergency telephone number

GBK Gefahrgut Büro GmbH, Ingelheim, Germany:
From outside US : (001) 352-323-3500
(First call in English, response in your language is possible)
US & Canada (toll free) : 1-800-5355-053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

| | |
|--|---|
| Acute toxicity, Category 4 | H302: Harmful if swallowed. |
| Skin irritation, Category 2 | H315: Causes skin irritation. |
| Eye irritation, Category 2 | H319: Causes serious eye irritation. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Reproductive toxicity, Category 2 | H361d: Suspected of damaging the unborn child. |
| Short-term (acute) aquatic hazard, Category 1 | H400: Very toxic to aquatic life. |
| Long-term (chronic) aquatic hazard, Category 1 | H410: Very toxic to aquatic life with long lasting effects. |

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

Hazardous components which must be listed on the label:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid
copper
Epoxy acrylate
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
Glycerol, propoxylated, esters with acrylic acid
2-Propenoic acid, ester with C12-16-alkyl glycidyl ether

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

| Chemical name | CAS-No. EC-No. | Classification REGULATION (EC) | Concentration (% w/w) |
|---------------|-------------------|-----------------------------------|--------------------------|
|---------------|-------------------|-----------------------------------|--------------------------|

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| | Index-No. Registration number | No 1272/2008 | |
|--|---|---|------------------------|
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | 28961-43-5 500-066-5 01-2119489900-30 | Skin Irrit. 2; H315 Skin Sens. 1; H317 | >= 25 - < 50 |
| copper | 7440-50-8 231-159-6 01-2119480154-42 | Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | >= 25 - < 50 |
| Epoxy acrylate | 55818-57-0 01-2119490020-53 | Skin Sens. 1; H317 | >= 10 - < 20 |
| 1-isopropyl-2,2- dimethyltrimethylene diisobutyrate | 6846-50-0 229-934-9 01-2119451093-47 | Repr. 2; H361d Aquatic Chronic 3; H412 | >= 3 - < 10 |
| zinc powder -zinc dust (stabilised) | 7440-66-6 231-175-3 030-001-01-9 01-2119467174-37 | Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | >= 2,5 - < 10 |
| Glycerol, propoxylated, esters with acrylic acid | 52408-84-1 500-114-5 01-2119487948-12 | Eye Irrit. 2; H319 Skin Sens. 1; H317 | >= 1 - < 10 |
| 2-hydroxy-1-(4-(4-(2-hydroxy-2- methylpropionyl)benzyl)phenyl)- 2-methylpropan-1-one | 474510-57-1 444-860-9 606-140-00-4 01-2119904050-59 | STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | >= 1 - < 2,5 |
| 2-Propenoic acid, ester with C12-16-alkyl glycidyl ether | 68071-40-9 01-2120755565-46- xxxx | Skin Sens. 1; H317 | >= 1 - < 10 |
| amines, hydrogenated tallow alkyl | 61788-45-2 (90640-32-7) 262-976-6 612-284-00-9 01-2119473799-15 | Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | >= 0,0025 - < 0,025 |

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move the victim to fresh air.

Move out of dangerous area.

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- Show this safety data sheet to the doctor in attendance.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.

If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of damaging the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Special powder against metal fire
Dry sand
ABC powder
- Unsuitable extinguishing media : Water
High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

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5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

Pick up and transfer to properly labelled containers.
Do not flush with water.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Advice on protection against fire and explosion : Keep away from heat and sources of ignition. No smoking.

Normal measures for preventive fire protection.
- Hygiene measures : General industrial hygiene practice.

When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep away from sources of ignition - No smoking. Do not store near combustible materials. Keep containers tightly closed in a cool, well-ventilated place. To maintain product quality, do not store in heat or direct sunlight.

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage conditions : Protect from humidity and water.
- Advice on common storage : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Do not store together with oxidizing and self-igniting products.
- Dampness : Keep in a dry, cool and well-ventilated place.
- Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---------------------|--|-------------------------------|-----------------------------------|--------|
| copper | 7440-50-8 | NGV (Total dust) | 1 mg/m ³ (Copper) | SE AFS |
| Further information | Inhalable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.3 and having sampling characteristics as specified in paragraph 5.1. Respirable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.11 and having sampling characteristics as specified in paragraph 5.3. Total dust refers to all the particles (aerosols) trapped in a filter in the sampling apparatus described in Methods, Sampling of total dust and respirable dust, method nr 1010, published by the National Board of Occupational Safety and Health, now Work Environment Authority. The filter diameter shall normally be 37 mm but can also be 25 mm. Despite its name, not the total amount of airborne particles is measured by this method. | | | |
| | | NGV (Respirable dust) | 0,2 mg/m ³ (Copper) | SE AFS |
| Further information | Inhalable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.3 and having sampling characteristics as specified in paragraph 5.1. Respirable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.11 and having sampling characteristics as specified in paragraph 5.3. Total dust refers to all the particles (aerosols) trapped in a filter in the sampling apparatus described in Methods, Sampling of total dust and respirable dust, method nr 1010, published by the National Board of Occupational Safety and Health, now Work Environment Authority. The filter diameter shall normally be 37 mm but can also be 25 mm. Despite its name, not the total amount of airborne particles is measured by this method. | | | |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|-----------|-----------------|------------------------------|------------------------|
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | Workers | Skin contact | long term – systemic effects | 0,8 mg/kg |
| | Workers | Inhalation | long term – systemic effects | 16,2 mg/m ³ |
| | Consumers | Skin contact | long term – systemic effects | 0,5 mg/kg |
| | Consumers | Inhalation | long term – systemic | 4,9 mg/m ³ |

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| | | | | |
|--|-----------|--------------|-------------------------------|-------------|
| | | | effects | |
| | Consumers | Ingestion | long term – systemic effects | 1,4 mg/kg |
| copper | Workers | Skin contact | short term – systemic effects | 273 mg/kg |
| | Workers | Inhalation | short term – systemic effects | 20 mg/m3 |
| | Workers | Skin contact | long term – systemic effects | 137 mg/kg |
| | Consumers | Skin contact | short term – systemic effects | 273 mg/kg |
| | Consumers | Inhalation | short term – systemic effects | 20 mg/m3 |
| Epoxy acrylate | Workers | Skin contact | long term – systemic effects | 33 mg/kg |
| | Workers | Inhalation | long term – systemic effects | 1,17 mg/m3 |
| | Consumers | Inhalation | long term – systemic effects | 0,29 mg/m3 |
| | Consumers | Skin contact | long term – systemic effects | 16,67 mg/kg |
| | Consumers | Oral | long term – systemic effects | 0,17 mg/kg |
| 1-isopropyl-2,2-dimethyltrimethylene diisobutyrate | Workers | Skin contact | long term – systemic effects | 31,20 mg/kg |
| | Workers | Inhalation | long term – systemic effects | 110 mg/m3 |
| | Consumers | Ingestion | long term – systemic effects | 18,8 mg/kg |
| | Consumers | Skin contact | long term – systemic effects | 18,8 mg/kg |
| | Consumers | Inhalation | long term – systemic effects | 32,60 mg/m3 |
| zinc powder -zinc dust (stabilised) | Workers | Inhalation | long term – systemic effects | 5 mg/m3 |
| | Workers | Skin contact | long term – systemic effects | 83 mg/kg |
| | Consumers | Ingestion | long term – systemic effects | 0,83 mg/kg |
| | Consumers | Skin contact | long term – systemic effects | 83 mg/kg |
| | Consumers | Inhalation | long term – systemic effects | 2,5 mg/m3 |
| Glycerol, propoxylated, esters with acrylic acid | Workers | Skin contact | long term – systemic effects | 1,92 mg/kg |
| | Workers | Inhalation | long term – systemic effects | 16,22 mg/m3 |
| | Consumers | Ingestion | long term – systemic effects | 1,39 mg/kg |
| | Consumers | Skin contact | long term – systemic effects | 1,15 mg/kg |

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| | | | | |
|--|-----------|------------|------------------------------|------------------------|
| | | | effects | |
| | Consumers | Inhalation | long term – systemic effects | 4,87 mg/m ³ |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name | Environmental Compartment | Value |
|---|---------------------------|----------------|
| Propylidynetrimethanol, ethoxylated, esters with acrylic acid | Soil | 0,00587 mg/kg |
| | Fresh water | 0,00195 mg/l |
| | Fresh water sediment | 0,0082 mg/kg |
| | STP | 10 mg/l |
| | Marine water | 0,000195 mg/l |
| copper | Marine sediment | 0,00082 mg/kg |
| | Soil | 65,5 mg/kg |
| | Fresh water | 0,0078 mg/l |
| | Fresh water sediment | 87 mg/kg |
| | Marine water | 0,0052 mg/l |
| Epoxy acrylate | Marine sediment | 676 mg/kg |
| | STP | 0,230 mg/l |
| | Fresh water | 0,1 mg/l |
| | Marine water | 0,01 mg/l |
| | Fresh water sediment | 35,8 mg/kg |
| 1-isopropyl-2,2-dimethyltrimethylene diisobutyrate | Marine sediment | 3,58 mg/kg |
| | clarification plant | 10 mg/l |
| | Soil | 7,1 mg/kg |
| | Fresh water | 0,014 mg/l |
| | Marine water | 0,0014 mg/l |
| zinc powder -zinc dust (stabilised) | Fresh water sediment | 5,29 mg/kg |
| | Soil | 1,05 mg/kg |
| | STP | 3 mg/l |
| | Marine sediment | 0,529 mg/kg |
| | Fresh water | 0,0206 mg/l |
| Glycerol, propoxylated, esters with acrylic acid | Fresh water sediment | 117,8 mg/kg |
| | Marine water | 0,0061 mg/l |
| | Soil | 35,6 mg/kg |
| | Marine sediment | 56,5 mg/kg |
| | Soil | 0,00111 mg/kg |
| | Fresh water | 0,00574 mg/l |
| | Fresh water sediment | 0,01697 mg/kg |
| | Marine water | 0,000574 mg/l |
| | Marine sediment | 0,001697 mg/kg |
| | STP | 10 mg/l |

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

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Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material

: Solvent-resistant gloves (butyl-rubber)

Remarks

: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection

: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection

: Use suitable breathing protection if workplace concentration requires.
Respirator with a vapour filter (EN 141)

Environmental exposure controls

Water

: The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid
Colour : gold
Odour : characteristic
Odour Threshold : No data available
pH : No data available
Freezing point : No data available

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Boiling point/boiling range : No data available

Flash point : > 100 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Auto-ignition temperature : No data available

Smoldering temperature : No data available

Decomposition temperature : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : No data available

Bulk density : No data available

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Flow time : No data available

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9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : Do not allow evaporation to dryness.
No data available

10.5 Incompatible materials

10.6 Hazardous decomposition products

Thermal decomposition : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 1.898 mg/kg
Method: Calculation method

Components:

copper:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2.000 mg/kg
Method: OECD Test Guideline 402

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zinc powder -zinc dust (stabilised):

Acute oral toxicity : (Rat): > 2.000 mg/kg
Acute inhalation toxicity : LC50 (Rat): 5,41 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

2-hydroxy-1-(4-(4-(2-hydroxy-2-methylpropionyl)benzyl)phenyl)-2-methylpropan-1-one:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

amines, hydrogenated tallow alkyl:

Acute oral toxicity : LD50 (Rat): > 2.000 - 5.000 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Components:

:

Result: Skin irritation

Remarks: May cause skin irritation and/or dermatitis.

:

Remarks: May cause skin irritation in susceptible persons.

:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation

:

Remarks: May cause skin irritation and/or dermatitis.

amines, hydrogenated tallow alkyl:

Result: Skin irritation

Remarks: May cause skin irritation in susceptible persons.

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Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Eye irritation

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

copper:

Result: Eye irritation

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Species: Rabbit

Exposure time: 72 h

Method: OECD Test Guideline 405

Result: No eye irritation

Glycerol, propoxylated, esters with acrylic acid:

Remarks: Eye irritation

amines, hydrogenated tallow alkyl:

Result: Irreversible effects on the eye

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks: Causes sensitisation.

May cause sensitisation of susceptible persons by skin contact.

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:

Result: May cause sensitisation by skin contact.

Remarks: Causes sensitisation.

May cause sensitisation of susceptible persons by skin contact.

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Glycerol, propoxylated, esters with acrylic acid:

Remarks: Causes sensitisation.

May cause sensitisation of susceptible persons by skin contact.

2-Propenoic acid, ester with C12-16-alkyl glycidyl ether:

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Suspected of damaging the unborn child.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Components:

amines, hydrogenated tallow alkyl:

Target Organs: Liver, Gastrointestinal tract, Immune system

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity

Not classified based on available information.

Components:

amines, hydrogenated tallow alkyl:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:

Remarks: No data available

copper:

Remarks: No data available

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zinc powder -zinc dust (stabilised):

Remarks: No data available

Glycerol, propoxylated, esters with acrylic acid:

Remarks: No data available

amines, hydrogenated tallow alkyl:

Remarks: Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:

Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 10.232,73 mg/l

copper:

M-Factor (Short-term (acute) aquatic hazard) : 10

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 2,46 mg/l

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

zinc powder -zinc dust (stabilised):

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

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amines, hydrogenated tallow alkyl:

M-Factor (Short-term (acute) aquatic hazard) : 10

M-Factor (Long-term (chronic) aquatic hazard) : 10

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

Components:

Propylidyntrimethanol, ethoxylated, esters with acrylic acid:

Additional ecological information : No data available

copper:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

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zinc powder -zinc dust (stabilised):

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

Glycerol, propoxylated, esters with acrylic acid:

Additional ecological information : No data available

amines, hydrogenated tallow alkyl:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

European Waste Catalogue : 08 03 12 - waste ink containing dangerous substances

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
In accordance with local and national regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number

ADR : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Copper metal powder)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

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IATA : (Copper metal powder)
Environmentally hazardous substance, liquid, n.o.s.
(Copper metal powder)

14.3 Transport hazard class(es)

ADR : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)
Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous Dangerous Goods

IATA (Passenger)
Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous Dangerous Goods

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

IATA (Passenger)
Environmentally hazardous : yes

IATA (Cargo)
Environmentally hazardous : yes

14.6 Special precautions for user

Remarks : For single packagings <=5L / 5 kg, or combination packagings containing inner packagings <= 5L / 5 kg net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

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14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

15.2 Chemical safety assessment

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H361d : Suspected of damaging the unborn child.
H373 : May cause damage to organs through prolonged or repeated exposure.

H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Asp. Tox. : Aspiration hazard
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Repr. : Reproductive toxicity
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
SE AFS : Sweden. Occupational Exposure Limit Values
SE AFS / NGV : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging

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Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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

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