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

1.1 Product identifier
Trade name: ROTOSTAR UV 166 877 FLEXO INK
Product code: 023411U20

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)
Skin irritation, Category 2
H315: Causes skin irritation.
Skin sensitisation, Category 1
H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2
H361d: Suspected of damaging the unborn child.
Long-term (chronic) aquatic hazard, Category 3
H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms : 

Signal word : Warning

Hazard statements : 
H315 Causes skin irritation. 
H317 May cause an allergic skin reaction. 
H361d Suspected of damaging the unborn child. 
H412 Harmful 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 
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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Registration number</th>
<th>Classification REGULATION (EC) No 1272/2008</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid</td>
<td>28961-43-5</td>
<td>500-066-5</td>
<td>01-2119489900-30</td>
<td></td>
<td>Skin Irrit. 2; H315</td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
<tr>
<td>Epoxy acrylate</td>
<td>55818-57-0</td>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1; H317</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: Move the victim to fresh air. Do not leave the victim unattended. Move out of dangerous area. 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. Flush eyes with water as a precaution. 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.

4.2 Most important symptoms and effects, both acute and delayed
Risks:
- Causes skin irritation.
- May cause an allergic skin reaction.
- 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:
  - Dry sand
  - ABC powder
  - Foam
- Unsuitable extinguishing media:
  - 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.

5.3 Advice for firefighters
- Special protective equipment for firefighters:
  - Wear self-contained breathing apparatus for firefighting if necessary.
- Further information:
  - 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.
  - 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.
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Do not flush with water.
- Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

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:
- Normal measures for preventive fire protection.

Hygiene measures:
- 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:
- Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen). Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use.

- 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:

Do not store near acids.
Do not store together with oxidizing and self-igniting products.
Never allow product to get in contact with water during storage.
Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Further information on storage stability:

No decomposition if stored and applied as directed.

7.3 Specific end use(s)
This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>HTP-arvot 8h (Dust)</td>
<td>5 mg/m³</td>
<td>FI OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTP-arvot 15 min (Dust)</td>
<td>10 mg/m³</td>
<td>FI OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HTP-arvot 8h (Aluminium)</td>
<td>1.5 mg/m³</td>
<td>FI OEL</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>0,8 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>16,2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>0,5 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>4,9 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>1,4 mg/kg</td>
</tr>
<tr>
<td>Epoxy acrylate</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>33 mg/kg</td>
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<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>1,17 mg/m³</td>
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<tr>
<td>Substance name</td>
<td>Environmental Compartment</td>
<td>Value</td>
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<td></td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid</td>
<td>Soil</td>
<td>0.00587 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0.00195 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.0082 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>10 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.000195 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.00082 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epoxy acrylate</td>
<td>Fresh water</td>
<td>0.1 mg/l</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.01 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>3.58 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>3.58 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>clarification plant</td>
<td>10 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>7.1 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium powder (stabilised)</td>
<td>Fresh water</td>
<td>0.0749 mg/l</td>
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</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

ROTOSTAR UV 166 877 FLEXO INK

<table>
<thead>
<tr>
<th>Substance</th>
<th>Clarification plant</th>
<th>Fresh water</th>
<th>0.014 mg/l</th>
<th>Marine water</th>
<th>0.0014 mg/l</th>
<th>Fresh water sediment</th>
<th>5.29 mg/kg</th>
<th>Soil</th>
<th>1.05 mg/kg</th>
<th>STP</th>
<th>3 mg/l</th>
<th>Marine sediment</th>
<th>0.529 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-isopropyl-2,2-dimethyltrimethylene diisobutyrate</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Personal protective equipment
Eye protection: Goggles
Hand protection
Material: Solvent-resistant gloves (butyl-rubber)
Remarks: Take note of the information given by the producer concerning permeability and breakthrough times, and of special workplace conditions (mechanical strain, duration of contact). The exact breakthrough 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.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour:</td>
<td>silver</td>
</tr>
<tr>
<td>Odour:</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odour Threshold:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range:</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No data available</td>
</tr>
<tr>
<td>Self-ignition:</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Smoldering temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties:</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Density:</td>
<td>No data available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

ROSTOPSTAR UV 166 877 FLEXO INK

10.2 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: Contact with acids and alkalis may release hydrogen.
Stable under recommended storage conditions.

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

10.5 Incompatible materials
Materials to avoid: Acids
Bases
Oxidizing agents

10.6 Hazardous decomposition products
Contact with water or humid air: This information is not available.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**
Not classified based on available information.

**Components:**

aluminium powder (stabilised):
Acute inhalation toxicity:
- LC50 (Rat): > 5 mg/l
- Exposure time: 4 h
- Test atmosphere: dust/mist

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Acute dermal toxicity:
- LD50 Dermal (Rabbit): > 2.000 mg/kg
- Method: OECD Test Guideline 402

2-hydroxy-1-(4-(4-hydroxy-2-methylpropionyl)benzyl)phenyl)-2-methylpropan-1-one:
Acute oral toxicity:
- LD50 (Rat): > 2.000 mg/kg

**Skin corrosion/irritation**
Causes skin irritation.

**Product:**
Remarks: May cause skin irritation and/or dermatitis.

**Components:**

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Result: Skin irritation

Remarks: May cause skin irritation and/or dermatitis.

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Species: Rabbit
- Exposure time: 4 h
- Method: OECD Test Guideline 404
- Result: No skin irritation

Glycerol, propoxylated, esters with acrylic acid:
Remarks: May cause skin irritation and/or dermatitis.
Serious eye damage/eye irritation
Not classified based on available information.

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

**Components:**

**Propylidynetrimethanol, ethoxylated, esters with acrylic acid:**
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

**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

**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.

**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.

Aspiration toxicity
Not classified based on available information.

Further information

Product:
Remarks: No data available

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Remarks: No data available

Glycerol, propoxylated, esters with acrylic acid:
Remarks: No data available

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

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.
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. Harmful to aquatic life with long lasting effects.

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Additional ecological information: No data available

Glycerol, propoxylated, esters with acrylic acid:
Additional ecological information: No data available

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

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards

14.6 Special precautions for user

Remarks: Not classified as dangerous in the meaning of transport regulations.

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

| H228 | Flammable solid. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| 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

Aquatic Acute: Short-term (acute) aquatic hazard
Aquatic Chronic: Long-term (chronic) aquatic hazard
Eye Irrit.: Eye irritation
Flam. Sol.: Flammable solids
Repr.: Reproductive toxicity
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
STOT RE: Specific target organ toxicity - repeated exposure
FI OEL: Finland. HTP Values - Concentrations Known to be Harmful
FI OEL / HTP-avrot 8h: Long term exposure limit
FI OEL / HTP-avrot 15 min: Short term exposure limit

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 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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