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

1.1 Product identifier

   Trade name   : ROTOSTAR HE 81-41203 Silver
   Material number   : 072745FY0

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)
   Flammable liquids, Category 2  H225: Highly flammable liquid and vapour.
   Eye irritation, Category 2  H319: Causes serious eye irritation.
   Specific target organ toxicity - single exposure, Category 3, Central nervous system  H336: May cause drowsiness or dizziness.

   Classification (67/548/EEC, 1999/45/EC)
   Highly flammable  R11: Highly flammable.
   Irritant  R36: Irritating to eyes.
R67: Vapours may cause drowsiness and dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:
- Flame
- Exclamation mark

Signal word: Danger

Hazard statements:
- H225: Highly flammable liquid and vapour.
- H319: Causes serious eye irritation.
- H336: May cause drowsiness or dizziness.

Precautionary statements:
Prevention:
- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233: Keep container tightly closed.
- P261: Avoid breathing dust/ fume/ gas/ mist/vapours/ spray.

Response:
- P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P312: Call a POISON CENTER/doctor if you feel unwell.
- P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinguishment.

Hazardous components which must be listed on the label:
- 107-98-2: 1-methoxy-2-propanol
- 141-78-6: ethyl acetate
- 67-63-0: isopropanol

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.

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components
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: Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.

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.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms: No information available.
Risks: No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Dry sand
ABC powder
Foam

Unsuitable extinguishing media: Water

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. For safety reasons in case of fire, cans should be stored separately in closed containments.
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.
- Ensure adequate ventilation.
- Remove all sources of ignition.
- Evacuate personnel to safe areas.
- Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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).

- 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).
- Do not flush with water.

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:**
- Avoid formation of aerosol.
- 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.
- Take precautionary measures against static discharges.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Open drum carefully as content may be under pressure.
- Dispose of rinse water in accordance with local and national regulations.

**Advice on protection against fire and explosion:**
- Do not spray on a naked flame or any incandescent material.
- Take necessary action to avoid static electricity discharge.
(which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

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.

No smoking. 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.

Other data: 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

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis (Version Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-methoxy-2-propanol</td>
<td>107-98-2</td>
<td>STEL</td>
<td>150 ppm 568 mg/m³</td>
<td>2000/39/EC (2000-06-16)</td>
</tr>
<tr>
<td>Further information</td>
<td>Identifies the possibility of significant uptake through the skin, Indicative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-methoxy-2-propanol</td>
<td>107-98-2</td>
<td>TWA</td>
<td>100 ppm 375 mg/m³</td>
<td>2000/39/EC (2000-06-16)</td>
</tr>
<tr>
<td>Further information</td>
<td>Identifies the possibility of significant uptake through the skin, Indicative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-methoxy-2-</td>
<td>107-98-2</td>
<td>TWA</td>
<td>100 ppm</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

GB EH40
Further information: Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TLV Value</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>propanol</td>
<td>375 mg/m³</td>
<td>(2005-04-06)</td>
<td></td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td>Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.</td>
<td></td>
</tr>
<tr>
<td>1-methoxy-2-propanol</td>
<td>107-98-2</td>
<td>STEL 150 ppm, 560 mg/m³</td>
<td>GB EH40 (2005-04-06)</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td>Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.</td>
<td></td>
</tr>
<tr>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>TWA 200 ppm</td>
<td>GB EH40 (2005-04-06)</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td>The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.</td>
<td></td>
</tr>
<tr>
<td>isopropanol</td>
<td>67-63-0</td>
<td>TWA 400 ppm, 999 mg/m³</td>
<td>GB EH40 (2006-09-01)</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td>The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.</td>
<td></td>
</tr>
<tr>
<td>aluminium powder</td>
<td>7429-90-5</td>
<td>TWA 10 mg/m³, 150 ppm</td>
<td>GB EH40 (2011-12-01)</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td>The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.</td>
<td></td>
</tr>
<tr>
<td>aluminium powder</td>
<td>7429-90-5</td>
<td>TWA 4 mg/m³, 600 ppm</td>
<td>GB EH40 (2011-12-01)</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td>The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.</td>
<td></td>
</tr>
<tr>
<td>aluminium powder</td>
<td>7429-90-5</td>
<td>TWA 10 mg/m³, 150 ppm</td>
<td>GB EH40 (2005-04-06)</td>
</tr>
</tbody>
</table>
| Further information  |           | For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is...
therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>aluminium powder (stabilised)</th>
<th>TWA (Respirable)</th>
<th>4 mg/m³</th>
<th>GB EH40 (2005-04-06)</th>
</tr>
</thead>
</table>
| Further information           | For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>aluminium powder (stabilised)</th>
<th>TWA (inhalable dust)</th>
<th>10 mg/m³</th>
<th>GB EH40 (2011-12-01)</th>
</tr>
</thead>
</table>
| Further information           | For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the
relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

### Further information

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<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>1-methoxypropan-2-ol (107-98-2)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>553.5 mg/m(^3)</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>50.6 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>369 mg/m(^3)</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>33 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>78 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>43.9 mg/m(^3)</td>
</tr>
<tr>
<td>ethyl acetate (141-78-6)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local</td>
<td>1468 mg/m(^3)</td>
</tr>
</tbody>
</table>
### ROTOSTAR HE 81-41203 Silver

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>effects</td>
<td></td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – systemic effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>long term – local effects</td>
</tr>
<tr>
<td>Workers Skin</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>short term – systemic effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>long term – local effects</td>
</tr>
<tr>
<td></td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Consumers Inh</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td></td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Workers Skin</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Consumers Inh</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td></td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
</tr>
<tr>
<td>Consumers Inh</td>
<td>Inhalation</td>
<td>long term – local effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>long term – systemic effects</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-methoxypropan-2-ol</td>
<td>Fresh water</td>
<td>10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>1 mg/l</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>52.3 mg/kg</td>
</tr>
<tr>
<td>aluminium</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                         |                            |          |
# ROTOSTAR HE 81-41203 Silver

**Version**: 1.1  
**Revision Date**: 09.01.2017  
**SDS Number**: 102000022901  
**Print Date**: 20.11.2018  
**Date of first issue**: 06.05.2015

<table>
<thead>
<tr>
<th>Substance</th>
<th>Soil</th>
<th>Marine sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethyl acetate (141-78-6)</td>
<td>4.59 mg/kg</td>
<td>5.2 mg/kg</td>
</tr>
<tr>
<td>STP</td>
<td></td>
<td>650 mg/l</td>
</tr>
<tr>
<td>Fresh water</td>
<td></td>
<td>0.24 mg/l</td>
</tr>
<tr>
<td>Marine water</td>
<td></td>
<td>0.024 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td></td>
<td>1.15 mg/kg</td>
</tr>
<tr>
<td>Marine sediment</td>
<td></td>
<td>0.115 mg/kg</td>
</tr>
<tr>
<td>propan-2-ol (67-63-0)</td>
<td></td>
<td>28 mg/kg</td>
</tr>
<tr>
<td>Fresh water</td>
<td></td>
<td>140.9 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td></td>
<td>552 mg/kg</td>
</tr>
<tr>
<td>Marine water</td>
<td></td>
<td>140.9 mg/l</td>
</tr>
<tr>
<td>Marine sediment</td>
<td></td>
<td>552 mg/kg</td>
</tr>
<tr>
<td>STP</td>
<td></td>
<td>2251 mg/l</td>
</tr>
<tr>
<td>aluminium (7429-90-5)</td>
<td></td>
<td>0.0749 mg/l</td>
</tr>
</tbody>
</table>

**8.2 Exposure controls**

**Personal protective equipment**

**Eye protection**: Goggles  
Eye wash bottle with pure water  
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 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.

In the case of vapour formation use a respirator with an approved filter.

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: silver
Odour: characteristic
Odour Threshold: No data available
pH: No data available
Freezing point: No data available
Boiling point/boiling range: 82 °C
Flash point: -4 °C

Evaporation rate: No data available
Flammability (solid, gas): No data available
Auto-flammability: No data available
Upper explosion limit: No data available
Lower explosion 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
Solubility(ies)
Water solubility: insoluble
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, dynamic: No data available
Viscosity, kinematic: No data available
Flow time: No data available
Explosive properties: No data available
Oxidizing properties: No data available

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: Contact with acids and alkalis may release hydrogen.
Stable under recommended storage conditions.
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Conditions to avoid: Do not allow evaporation to dryness.
Heat, flames and sparks.

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.
Thermal decomposition: This information is not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

141-78-6:  
Acute inhalation toxicity: LC50 (Rat): 56 mg/l
Exposure time: 4 h

Acute dermal toxicity: LD50 (Rabbit): > 18,000 mg/kg

67-63-0:  
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
SAFETY DATA SHEET
generated according to Regulation (EC) No. 1907/2006

ROTOSTAR HE 81-41203 Silver

Version 1.1	Revision Date: 09.01.2017	SDS Number: 102000022901	Print Date: 20.11.2018	Date of first issue: 06.05.2015

7429-90-5:
Acute inhalation toxicity: LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

107-98-2:
Acute oral toxicity: LD50 (Rat): 4,016 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 25.8 mg/l
Exposure time: 6 h
Test atmosphere: vapour
Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

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

Components:
34451-19-9:
Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Product:
Remarks: May cause irreversible eye damage.

Components:
34451-19-9:
Remarks: May cause irreversible eye damage.

Further information

Product:
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

Components:
34451-19-9:
Remarks: No data available
SECTION 12: Ecological information

12.1 Toxicity
No data available

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: Remarks: No data available

**Components:**
34451-19-9:
Additional ecological information: Remarks: No data available

SECTION 13: Disposal considerations

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

13.1 Waste treatment methods

**Product:**
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

**Contaminated packaging:**
Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number
14.2 UN proper shipping name

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14.3 Transport hazard class(es)

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14.4 Packing group

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14.5 Environmental hazards

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14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 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).

: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of R-Phrases

R10 : Flammable.
R11 : Highly flammable.
R36 : Irritating to eyes.
R37/38 : Irritating to respiratory system and skin.
R38 : Irritating to skin.
R41 : Risk of serious damage to eyes.
R61 : May cause harm to the unborn child.
R66 : Repeated exposure may cause skin dryness or cracking.
R67 : Vapours may cause drowsiness and dizziness.

Full text of H-Statements

H225 : Highly flammable liquid and vapour.
H226 : Flammable liquid and vapour.
H228 : Flammable solid.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H335 : May cause respiratory irritation.
H336 : May cause drowsiness or dizziness.
H360D : May damage the unborn child.

Full text of other abbreviations

Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Flam. Sol. : Flammable solids
Repr. : Reproductive toxicity
Skin Irrit. : Skin irritation
STOT SE : Specific target organ toxicity - single exposure

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
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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