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

1.1 Product identifier

Trade name: 9302 UNIPAK 500 SILVER LITHO
Product code: 014244RC0M1

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)
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 statements: H412 Harmful to aquatic life with long lasting effects.
Supplemental Hazard Statements: EUH066 Repeated exposure may cause skin dryness or cracking.
Precautionary statements: Prevention: P273 Disposal: Avoid release to the environment.
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>Classification REGULATION (EC) No 1272/2008</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>013-002-00-1</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 20 - &lt; 25</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent-refined middle; Gasoil - unspecified</td>
<td>64741-91-9</td>
<td>265-093-4</td>
<td>649-214-00-1</td>
<td>Asp. Tox. 1; H304</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>1-isopropyl-2,2-dimethyltrimethylene diisobutyrate</td>
<td>6846-50-0</td>
<td>229-934-9</td>
<td>01-2119451093-47</td>
<td>Repr. 2; H361d Aquatic Chronic 3; H412</td>
<td>&gt;= 1 - &lt; 2,5</td>
</tr>
<tr>
<td>amines, hydrogenated tallow alkyl</td>
<td>61788-45-2</td>
<td>(90640-32-7)</td>
<td>262-976-6</td>
<td>Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>&gt;= 0,25 - &lt; 1</td>
</tr>
</tbody>
</table>

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. Do not leave the victim unattended. No hazards which require special first aid measures.

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.

In case of eye contact:
- Immediately flush eye(s) with plenty of water.
- Remove contact lenses.
- 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: Repeated exposure may cause skin dryness or cracking.

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.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains. 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). Wipe up with absorbent material (e.g. cloth, fleece). 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 : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice.

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.

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

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</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>TWA (Dust)</td>
<td>3 mg/m³</td>
<td>RO OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Fumes)</td>
<td>1 mg/m³</td>
<td>RO OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Dust)</td>
<td>10 mg/m³</td>
<td>RO OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Fumes)</td>
<td>3 mg/m³</td>
<td>RO OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable dust)</td>
<td>10 mg/m³</td>
<td>RO OEL</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Sampling time</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>Aluminium (Aluminium): 200 µg/l (Urine)</td>
<td>End of shift</td>
<td>RO BAT</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>aluminium powder (stabilised)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>3,72 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Oral</td>
<td>long term – systemic effects</td>
<td>3,95 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>3,72 mg/m³</td>
</tr>
<tr>
<td>1-isopropyl-2,2-dimethyltrimethylene diisobutyrate</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>31,20 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic</td>
<td>110 mg/m³</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>aluminium powder (stabilised)</td>
<td>Fresh water</td>
<td>0.0749 mg/l</td>
</tr>
<tr>
<td></td>
<td>clarification plant</td>
<td>20 mg/l</td>
</tr>
<tr>
<td>1-isopropyl-2,2-dimethyltrimethylene diisobutyrate</td>
<td>Fresh water</td>
<td>0.014 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.0014 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>5.29 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>1.05 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>3 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.529 mg/kg</td>
</tr>
</tbody>
</table>

### 8.2 Exposure controls

#### Personal protective equipment

<table>
<thead>
<tr>
<th>Eye protection</th>
<th>Goggles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand protection</td>
<td>Solvent-resistant gloves (butyl-rubber)</td>
</tr>
<tr>
<td>Remarks</td>
<td>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.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Use suitable breathing protection if workplace concentration requires.</td>
</tr>
</tbody>
</table>

### 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>No data available</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>260 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>101 °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>
</tbody>
</table>
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: This information is not available.
Thermal decomposition: 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

Distillates (petroleum), solvent-refined middle; Gasoil -unspecified:
Acute oral toxicity: LD50 (Rat): > 5.000 mg/kg
Acute dermal toxicity: LD50 (Rabbit): > 2.000 mg/kg

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

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

Skin corrosion/irritation
Repeated exposure may cause skin dryness or cracking.

Components:

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

amines, hydrogenated tallow alkyl:
Result: Skin irritation
Remarks: May cause skin irritation in susceptible persons.
Serious eye damage/eye irritation
Not classified based on available information.

Components:
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Species: Rabbit
Exposure time: 72 h
Method: OECD Test Guideline 405
Result: No eye irritation

amines, hydrogenated tallow alkyl:
Result: Irreversible effects on the eye

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation
Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

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:**
- amines, hydrogenated tallow alkyl:
  Remarks: Solvents may degrease the skin.

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Product:**

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

**Components:**
- 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.

- **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. Harmful to aquatic life with long lasting effects.

**Components:**

**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 01 11 - waste paint and varnish containing organic solvents or other dangerous substances

13.1 Waste treatment methods

**Product:** The product should not be allowed to enter drains, water courses or the soil. In accordance with local and national regulations.

**Contaminated packaging:** 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.
   H304 : May be fatal if swallowed and enters airways.
   H315 : Causes skin irritation.
   H318 : Causes serious eye damage.
   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
   Asp. Tox. : Aspiration hazard
   Eye Dam. : Serious eye damage
   Flam. Sol. : Flammable solids
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.

RO / EN