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

1.1 Product identifier
   Trade name : METALSTAR SuperEco 08 4006 Silver
   Material number : 052687RC0

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)
   Not a dangerous substance according to GHS.
   Classification (67/548/EEC, 1999/45/EC)
   Not a hazardous substance or mixture.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

   Additional Labelling:
EUH210 Safety data sheet available on request.
EUH208 Contains Fatty acids, tall-oil, cobalt salts. May produce an allergic reaction.

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5 231-072-3 01-2119529243-45</td>
<td>F; R11</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 10 - &lt; 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), acid-treated middle</td>
<td>64742-13-8 265-113-1 01-2119448343-41</td>
<td>Xn; Xn; R65 R66</td>
<td>Asp. Tox. 1; H304</td>
<td>&gt;= 1 - &lt; 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
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
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:
- High volume water jet

5.2 Special hazards arising from the substance or mixture
This information is not available.

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

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

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
This information is not available.

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.

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
Components          | CAS-No.       | Value type (Form of exposure) | Control parameters | Basis (Version Date) |
---------------------|---------------|-------------------------------|--------------------|----------------------|
aluminium powder     | 7429-90-5     | TWA (Dust)                    | 3 mg/m³            | RO OEL (2012-01-19)  |
(stabilised)         |               |                               |                    |                      |
aluminium powder     | 7429-90-5     | TWA (Fumes)                   | 1 mg/m³            | RO OEL (2012-01-19)  |
(stabilised)         |               |                               |                    |                      |
aluminium powder     | 7429-90-5     | STEL (Dust)                   | 10 mg/m³           | RO OEL (2012-01-19)  |
(stabilised)         |               |                               |                    |                      |
aluminium powder     | 7429-90-5     | STEL (Fumes)                  | 3 mg/m³            | RO OEL (2012-01-19)  |
(stabilised)         |               |                               |                    |                      |
aluminium powder     | 7429-90-5     | TWA (Dust, inhalable fraction)| 10 mg/m³           | RO OEL (2012-01-19)  |
(stabilised)         |               |                               |                    |                      |

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</td>
<td>7429-90-5</td>
<td>Aluminium (Aluminium): 200 µg/l (Urine)</td>
<td>End of shift</td>
<td>RO BAT</td>
</tr>
<tr>
<td>(stabilised)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Personal protective equipment

Eye protection : Goggles

Safety glasses

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 : This information is not available.

Respiratory protection : Use suitable breathing protection if workplace concentration requires.

No personal respiratory protective equipment normally required.
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**: No data available
- **Flash point**: > 100 °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
- **Water solubility**: No data available
- **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.

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.

Thermal decomposition: This information is not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Further information

Product:
Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:
Ecotoxicology Assessment
Acute aquatic toxicity: This product has no known ecotoxicological effects.

Chronic aquatic toxicity: This product has no known ecotoxicological 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: Remarks: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product: In accordance with local and national regulations.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. 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 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): Not applicable

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of R-Phrases

R11: Highly flammable.
R65: Hazard: may cause lung damage if swallowed.
R66: Repeated exposure may cause skin dryness or cracking.

Full text of H-Statements

H228: Flammable solid.
H304: May be fatal if swallowed and enters airways.

Full text of other abbreviations

Asp. Tox.: Aspiration hazard
Flam. Sol.: Flammable solids

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
SAFETY DATA SHEET
generated by Regulation (EC) No. 1907/2006

METALSTAR SuperEco 08 4006 Silver

Version 2.2 Revision Date: 11.04.2017 SDS Number: 102000000240 Print Date: 20.11.2018 Date of first issue: 31.07.2014

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; 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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