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

1.1 Product identifier
   Trade name: STAPA DL REFLEXAL 211/80 Aluminium Paste

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: msds.eckart@altana.com
   Responsible/issuing person

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).

2.3 Other hazards
   No information available.
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according to Regulation (EC) No. 1907/2006

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>7429-90-5 231-072-3 01-2119529243-45</td>
<td>F; R11</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 50 - &lt;= 100</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.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

Move the victim to fresh air.
Do not leave the victim unattended.

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 : Remove contact lenses.
If eye irritation persists, consult a specialist.
Immediately flush eye(s) with plenty of water.

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, Special powder against metal fire

Unsuitable extinguishing media : ABC powder, Carbon dioxide (CO2), Water, Foam

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 : Use personal protective equipment.

Wear self contained breathing apparatus for fire fighting if necessary.

Further information : Use a water spray to cool fully closed containers. 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.

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 : Avoid dust formation.

Evacuate personnel to safe areas.

Use personal protective equipment.

6.2 Environmental precautions
6.3 Methods and materials for containment and cleaning up

Methods for cleaning up:
- Pick up and arrange disposal without creating dust.
- Sweep up and shovel.
- Do not flush with water.
- Keep in suitable, closed containers for disposal.
- Use mechanical handling equipment.
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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:
Electrical installations / working materials must comply with the technological safety standards.

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.

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. Keep away from oxidising agents and strongly acid or alkaline materials. Never allow product to get in contact with water during storage. Keep away from
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oxidising 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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m3</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Respirable)</td>
<td>4 mg/m3</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m3</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information
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. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

Further information
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. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

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.
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 7429-90-5</th>
<th>TWA (Respirable)</th>
<th>4 mg/m³</th>
<th>2005-04-06</th>
<th>GB EH40</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.
8.2 Exposure controls

**Personal protective equipment**

**Eye protection**
- Safety glasses
- Goggles

**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**
- Protective suit

**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>Pasty solid</td>
</tr>
<tr>
<td>Colour</td>
<td>silver</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</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>no data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 300 °C</td>
</tr>
<tr>
<td>Bulk density</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>The product is not flammable.</td>
</tr>
<tr>
<td>Auto-flammability</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>no data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>no data available</td>
</tr>
<tr>
<td>Flow time</td>
<td>no data available</td>
</tr>
</tbody>
</table>

9.2 Other information

no data available
SECTION 10: Stability and reactivity

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions: Stable under recommended storage conditions.

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

10.5 Incompatible materials
Materials to avoid: no data available

10.6 Hazardous decomposition products
Hazardous decomposition products: no data available
Other information: no data 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
Skin corrosion/irritation
   no data available

Serious eye damage/eye irritation
   no data available

Respiratory or skin sensitisation
   no data available

Carcinogenicity
   no data available

Toxicity to reproduction/fertility
   no data available

Reprod.Tox./Development/Teratogenicity
   no data available

STOT - single exposure
   no data available

STOT - repeated exposure
   no data available

Aspiration toxicity
   no data available

Further information
   Product
   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

no data available

12.6 Other adverse effects

Product:

Additional ecological information : no data available

SECTION 13: Disposal considerations

European Waste Catalogue : 12 01 04 - non-ferrous metal dust and particles

13.1 Waste treatment methods

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
SECTION 14: Transport information

14.1 UN number
14.2 Proper shipping name
14.3 Transport hazard class
14.4 Packing group
14.5 Environmental hazards
14.6 Special precautions for user
   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
   no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
   Water contaminating class : nwg  not water endangering
   (Germany)

15.2 Chemical Safety Assessment
   no data available

SECTION 16: Other information

Full text of R-Phrases
   R11       Highly flammable.

Full text of H-Statements
   H228      Flammable solid.
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.