SECTION 1. IDENTIFICATION

Product name : STANDART PCS 3500 Aluminium Powder
Product code : 040626D70

Manufacturer or supplier's details
Company name of supplier : ECKART GmbH
Address : Guentersthal 4
           Hartenstein 91235
Telephone : +499152770
Telefax : +499152777008
Emergency telephone : CHEMTREC: 800-424-9300
                      CHEMTREC: 1-703-527-3387 (International)
                      GBK Gefahrgut Buero 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. HAZARDOUS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations
Flammable solids : Category 1
Combustible dust : Category 1

GHS label elements
Hazard pictograms : 

Signal Word : Danger
Hazard Statements : H228 Flammable solid.
                   May form combustible dust concentrations in air.
Precautionary Statements:

**Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**
P370 + P378 In case of fire: Use for extinction: Special powder for metal fires.
P370 + P378 In case of fire: Use for extinction: Dry sand.

Other hazards
None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>&gt;= 90 - &lt;= 100</td>
</tr>
</tbody>
</table>

### SECTION 4. FIRST AID MEASURES

**General advice:**
Take the victim into fresh air. Move out of dangerous area.

**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 on skin, rinse well with water. If on clothes, remove clothes.

**In case of eye contact:**
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.

Most important symptoms and effects, both acute and delayed

: None known.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

: Dry sand
   Special powder against metal fire

Unsuitable extinguishing media

: ABC powder
   Carbon dioxide (CO2)
   Water
   Foam

Specific hazards during fire fighting

: Contact with water liberates extremely flammable gas (hydrogen).

Further information

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

Special protective equipment for fire-fighters

: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Use personal protective equipment.
Evacuate personnel to safe areas.
Avoid dust formation.
Remove all sources of ignition.

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.

Methods and materials for containment and cleaning up

: Use mechanical handling equipment.
Do not use a vacuum cleaner.
Do not flush with water.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion:
- Use explosion-proof equipment.
- During processing, dust may form explosive mixture in air.
- Take measures to prevent the build up of electrostatic charge.
- When transferring from one container to another apply earthing measures and use conductive hose material.
- Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling:
- Avoid creating dust.
- Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
- Store away from heat.
- 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.

Conditions for safe storage:
- Earthing of containers and apparatuses is essential.
- Reaction with water liberates extremely flammable gas (hydrogen)
- 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.
- Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid:
- 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.
SAFETY DATA SHEET

STANDART PCS 3500 Aluminium Powder

Further information on storage stability: Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>TWAEV 10 mg/m3</td>
<td>CA QC OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 10 mg/m3</td>
<td>CA AB OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable) 1 mg/m3</td>
<td>CA BC OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Dust) 10 mg/m3</td>
<td>CA AB OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV 10 mg/m3</td>
<td>CA QC OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable) 1 mg/m3</td>
<td>CA BC OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV (Fumes) 5 mg/m3</td>
<td>CA QC OEL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction) 1 mg/m3</td>
<td>ACGIH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction) 1 mg/m3</td>
<td>ACGIH</td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection: Use suitable breathing protection if workplace concentration requires. Breathing apparatus with filter. P1 filter

Hand protection
Material: Leather
Glove length: Long sleeve gloves

Remarks: Leather gloves The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**
- Face-shield
- Safety glasses

**Skin and body protection**
- Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1; Anti-static safety shoes
- Dust impervious protective suit
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**
- Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>powder</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>silver</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>odorless</td>
</tr>
<tr>
<td><strong>Odor Threshold</strong></td>
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</tr>
<tr>
<td><strong>pH</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>660 °C</td>
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<tr>
<td><strong>Boiling point/boiling range</strong></td>
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<tr>
<td><strong>Flash point</strong></td>
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<tr>
<td><strong>Evaporation rate</strong></td>
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<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>combustible dust</td>
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<tr>
<td><strong>Upper explosion limit / Upper flammability limit</strong></td>
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<tr>
<td><strong>Lower explosion limit / Lower flammability limit</strong></td>
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<td><strong>Vapor pressure</strong></td>
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<td><strong>Relative density</strong></td>
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<tr>
<td><strong>Density</strong></td>
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<td><strong>Solubility(ies)</strong></td>
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<td><strong>Partition coefficient: n-octanol/water</strong></td>
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<tr>
<td><strong>Autoignition temperature</strong></td>
<td>340 °C</td>
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<tr>
<td><strong>Decomposition temperature</strong></td>
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</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>No data available</td>
</tr>
</tbody>
</table>

### SECTION 10. STABILITY AND REACTIVITY
Reactivity: No decomposition if stored and applied as directed.
Chemical stability: No decomposition if stored and applied as directed.
Possibility of hazardous reactions: Contact with acids and alkalis may release hydrogen. Stable under recommended storage conditions. Dust may form explosive mixture in air.
Conditions to avoid: Heat, flames and sparks.
Incompatible materials: Acids, Bases, Oxidizing agents, Water

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
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.

Aspiration toxicity
Not classified based on available information.

Further information

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues : 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.
in accordance with local and national regulations.

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.
in accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
UN/ID No. : UN 1309
Proper shipping name : Aluminium powder, coated
Class : 4.1
Packing group : II
Labels : Flammable Solid
SAFETY DATA SHEET

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Packing instruction (cargo aircraft) : 448
Packing instruction (passenger aircraft) : 445

IMDG-Code
UN number : UN 1309
Proper shipping name : ALUMINIUM POWDER, COATED

Class : 4.1
Packing group : II
Labels : 4.1
EmS Code : F-G, S-G
Marine pollutant : no
Remarks : IMDG Code segregation group 15 - Powdered metals

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

TDG
UN number : UN 1309
Proper shipping name : ALUMINIUM POWDER, COATED

Class : 4.1
Packing group : II
Labels : 4.1
ERG Code : 170
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

NPRI Ingredients : Aluminum

The ingredients of this product are reported in the following inventories:
DSL : All components of this product are on the Canadian DSL
TSCA : On TSCA Inventory

Canadian lists
No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
The information provided in this Material 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
guide 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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