Identification of the substance/preparation and of the company/undertaking

Date issued: 10/1/2016
Product name: Aluminum alloys - AlMgSi, 6000 series except 6011, 6012, 6013
Synonyms: EN AW: 6xxx series except: 6011, 6012, 6013
Product group: Extruded Profiles
Use of the substance/preparation: Production of extruded profiles

Producer

Company name: Profile Custom Extrusions, LLC
Office address: 100 Anderson Road
City: Rome
State: GA
ZIP: 30161
Country: USA
Tel: 706-234-7558
Fax: 706-234-7649
Prepared by: Emergency telephone

Hazards identification

Description of hazard: The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Not hazarding as solid ingot. Fine particles from processing may be easily ignitable. Molten metal and fine particles are highly reactive in contact with water, acids, alkalis, strong oxidizers, halogenated compounds and certain metal oxides. Heating or welding of the product may produce toxic fumes of metal oxides.

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component name</th>
<th>Identification</th>
<th>Classification</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (metal)</td>
<td>CAS no.: 7429-90-5 EC no.: 231-072-3</td>
<td></td>
<td>90 - 97 %</td>
</tr>
<tr>
<td>Silicon</td>
<td>CAS no.: 7440-21-3 EC no.: 231-130-8</td>
<td></td>
<td>0 - 2 %</td>
</tr>
<tr>
<td>Magnesium (metal)</td>
<td>CAS no.: 7439-95-4 EC no.: 231-104-6</td>
<td></td>
<td>0 – 1.5 %</td>
</tr>
<tr>
<td>Titanium</td>
<td>CAS no.: 7440-32-6 EC no.: 231-142-3</td>
<td></td>
<td>0 – 0.2 %</td>
</tr>
<tr>
<td>Iron</td>
<td>CAS no.: 7439-89-6 EC no.: 231-096-4</td>
<td></td>
<td>0.04 - 1 %</td>
</tr>
<tr>
<td>Manganese</td>
<td>CAS no.: 7439-96-5 EC no.: 231-105-1</td>
<td></td>
<td>0 - 1 %</td>
</tr>
<tr>
<td>Zinc</td>
<td>CAS no.: 7440-66-6 EC no.: 231-158-0</td>
<td></td>
<td>0 – 0.5 %</td>
</tr>
</tbody>
</table>
### First-aid measures

**General**

Normally not relevant for extruded profiles.

**Inhalation**

In case of discomfort, move to ventilated area. If necessary, seek medical advice.

**Skin contact**

In case of contact with hot metal, flush with plenty of water. If severe, seek medical advice.

**Eye contact**

If particles or dust got in the eyes, flush with plenty of water. Seek medical advice if discomfort persists.

### Fire-fighting measures

**Suitable extinguishing media**

In case of aluminium fires or presence of liquid aluminium use a dry-powder extinguisher.

**Improper extinguishing media**

Do not use water or halogenated media.

**Fire and explosion hazards**

In the form of extruded profiles, the product is not flammable and has no risk of explosion. Fine dust from the product may be ignited and represent a risk of explosion. Burning dust from this product will produce noxious smoke containing metal oxides. Fumes from hot metal can form toxic gases with oxides from the metal.

### Accidental release measures

**Methods for cleaning**

Collect mechanically. Avoid dust formation and inhalation of dust. Recycle collected material if possible. (See also section 13).

**Other instructions**

The product can contain small amounts of copper. Copper can form environmental hazardous substances. Care must be taken so the product or dust from the product, is not disposed of in nature.

### Handling and storage

**Handling**

Extruded profiles may have sharp edges and sharp surface defects.

**Storage**

Extruded profiles shall be stored dry and free from oil and dust. Pay attention to stack stability.

### Exposure controls/personal protection

#### Exposure limit values

<table>
<thead>
<tr>
<th>Component name</th>
<th>Identification</th>
<th>Value</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium, dust (OSHA, PEL)</td>
<td>CAS no.: 7429-90-5</td>
<td>8 h.: 5 mg/m³ (resp.)</td>
<td>2008</td>
</tr>
</tbody>
</table>
### Exposure Limit Values

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS no.</th>
<th>EC no.</th>
<th>8 h.: Total (mg/m³)</th>
<th>8 h.: Respirable (mg/m³)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium, metal (ACGIH, TLV)</td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>15</td>
<td>1</td>
<td>2008</td>
</tr>
<tr>
<td>Silicon, dust (OSHA, PEL)</td>
<td>7440-21-3</td>
<td>231-130-8</td>
<td>5</td>
<td>15</td>
<td>2008</td>
</tr>
<tr>
<td>Magnesium oxide, dust (ACGIH, TLV)</td>
<td>1309-48-4</td>
<td>215-171-9</td>
<td>10</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Iron oxide, fume or respirable dust (as Fe) (OSHA, PEL)</td>
<td>1309-37-1</td>
<td>215-168-2</td>
<td>1</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Manganese and inorganic compounds (as Mn) (OSHA, PEL)</td>
<td>7439-96-5</td>
<td>213-105-1</td>
<td>5</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Manganese (Mn and compounds) (ACGIH, TLV)</td>
<td>7439-96-5</td>
<td>213-105-1</td>
<td>0.2</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Zinc oxide, dust (OSHA, PEL)</td>
<td>1314-13-2</td>
<td>215-222-5</td>
<td>5</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Zinc oxide, fume (OSHA, PEL)</td>
<td>1314-13-2</td>
<td>215-222-5</td>
<td>5</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Zink Oxide, dust (ACGHI, TLV)</td>
<td>1314-13-2</td>
<td>215-222-5</td>
<td>2</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Chromium (OSHA , PEL)</td>
<td>7440-47-3</td>
<td>231-157-5</td>
<td>1</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Chromium (ACGIH, TLV)</td>
<td>7440-47-3</td>
<td>231-157-5</td>
<td>0.5</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Copper (as Cu) (OSHA, PEL)</td>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>1</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Copper (ACGIH, TLV)</td>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>0.2</td>
<td>2008</td>
<td></td>
</tr>
</tbody>
</table>

### Exposure controls

**Recommended monitoring procedures**

Monitor the level of air pollution at the work place. Risk assesment of the use of the product, may result in different use of protective equipment than recommended below.

**Other Information about threshold limit values**

- **Exposure Limit Values - Abbreviations:**
  - OSHA: Occupational Safety and Health Administration (USA)
  - PEL: Permissible Exposure Limit
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - TLV: Treshold Limit Value
  - C: Cancer
  - A: Allergy

National occupational exposure limits must be taken into account.

All protective equipment should be labelled with CE. All protective equipment should be tested according to relevant CEN-standards.

**Occupational exposure controls**

Eye wash facilities should be available. Provide good ventilation. Avoid handling, such as welding, that will produce metal dust.
Respiratory protection
Wear respiratory protection with particle filter P2 in dusty conditions. When cutting, welding, grinding, melting etc., use fresh air supplied respiratory protection.

Hand protection
Wear leather gloves or the like when cutting, welding, grinding, melting etc.

Eye protection
Wear dust proof goggles in dusty conditions. Wear welder's goggles when welding, and tight fitting goggles when cutting, grinding or melting.

Skin protection (other than of the hands)
Use appropriate personal protective equipment to guard against cut or abrasion.

9. Physical and chemical properties
Physical state
Extrusion profile. Weight may vary with the length and diameter.

Odor
None

Color
Grey

Solubility description
Insoluble in water

Specific gravity
Value: 2.68 g/cm³
Comments: (Al)

Melting point/melting range
Value: 560-660 °C

Boiling point
Value: 2450 °C
Comments: (Aluminum)

Vapour pressure
Value: 1 mmHg
Comments: (applies to Al)

10. Stability and reactivity
Materials to avoid
Strong acids or bases. Molten aluminum may explode when getting in contact with water. When in form of particles, aluminum may explode in presence of halogenated acids, halogenated solvents, bromates,iodates or ammonium nitrate. Aluminum particles in contact with copper, lead or iron oxides can react violently and exothermic provided a source of ignition or intense heat.

Hazardous decomposition products
Flammable hydrogen gas may be released when in contact with strong acids or bases. Hydrogen is explosive in concentrations exceeding 4 vol-%. Otherwise this product shows little reaction with other chemicals.

Stability
Massive metal is stable and non-reactive under normal condition of use, storage and transport.

11. Toxicological information
Other information regarding health hazards
General
A dust free product does not imply any health risk. Cutting, welding, grinding etc. will generate dust, smoke or particles containing the components of this product. Heating above the melting point will produce metal vapors that can be oxidized to toxic metal oxides, or the vapor might condensate to aerosol containing respirable particles. Inhalation of metal aerosols and fumes might imply a health risk.

Contact with hot metal can give severe burns.

Inhalation
Metal dust/fumes may irritate respiratory system. Overexposure to dust or fumes may give chronic health effects (shortness of breath, cough, loss of lung function). Inhalation of fumes may give metal fever.

Skin contact
Metal dust/fumes may give chronic health effects (shortness of breath, cough, loss of lung function). Inhalation of fumes may give metal fever.

Eye contact
Dust irritates eyes.

Ingestion
Dust/particles/vapors may irritate mucous membranes.

Other Information
The product contains small amounts of chromium. Metal fumes of chromium VI compounds can cause cancer and allergy.

12. Ecological information
Components’ toxicological data

Other ecological information

<table>
<thead>
<tr>
<th>Mobility</th>
<th>Aluminum is not mobile in the environment, unless it comes in contact with an aqueous environment with a pH below 5.5 or above 8.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental details, conclusion</td>
<td>Contains small amounts of copper that can form environmental hazardous substances. Avoid outlet of metal dust, or metal in the environment.</td>
</tr>
</tbody>
</table>

13. Disposal considerations

<table>
<thead>
<tr>
<th>EWC waste code</th>
<th>06 04 05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product classified as hazardous waste</td>
<td>No</td>
</tr>
<tr>
<td>Specify the appropriate methods of disposal</td>
<td>Collect mechanically and place in suitable container. Dispose of at approved waste receiving station. Recycle if possible.</td>
</tr>
<tr>
<td>Other Information</td>
<td>Information of waste number and EWC-code are only intended as a guide. The user has to decide the final waste group numbers and EWC-codes based on the actual use of the product.</td>
</tr>
</tbody>
</table>

14. Transport information

| Dangerous goods ICAO/IATA Status: | No |
| Other applicable information. | Not classified as dangerous goods according to ADR, RID, IMDG or IATA. |

15. Regulatory information

| R phrases | Not subject to classification. |
| Comments | The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments. |
| No duty to declare owing to | Non-hazardous product |

16. Other information

| Sources of key data used to compile the safety data sheet | Information from the manufacturer. |
| Information which has been added, deleted or revised | First edition in English |
| Supplier’s notes | The safety data sheet has been approved in accordance with the regulations in force. BIS Production Partner is not responsible for any errors or deficiencies in the information received from the manufacturer/supplier. The manufacturer/supplier mentioned in section 1 is legally responsible for the contents of the safety data sheet. |
| Responsible for safety data sheet | Profile Custom Extrusions, LLC |