



## MATERIAL SAFETY DATA SHEET

REVISION NO. 2, June 2007

### 1. PRODUCT INFORMATION

**Product Name** : Aluminium Powder (Coated)  
**Chemical Symbol** : Al  
**CAS No.** : 7429-90-5  
**EINECS No.** : 231-072-3

**2. ITEM NO.** : PC series – 1212, 1213, 1215, 1216, ST22, ST44, M20, M30

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS NO.	UN NO
Aluminium	7429-90-5	1309

### 4. HAZARDS

**Health Hazard** - Harmful if inhaled

**Environmental** - No data available

**Physical** - Fine powder is flammable. If a cloud of aluminium dust is raised in the presence of a source of ignition, there is the risk of explosion in confined spaces.

**Chemical** -

- Fire & Explosion risk - Prolonged contact with water may result in reaction releasing flammable hydrogen gas.
- Will react with oxidizing agents or acids and alkalis, causing heat and hydrogen release which can result in fire and explosion.
- Can react violently with halogenated hydrocarbons causing explosion

### 5. HANDLING AND STORAGE

#### HANDLING

- Avoid generation of dust clouds
- Avoid sources of sparks or other sources of ignition
- Protect against static electricity
- Use suitable explosion proof equipment and spark-proof tools
- Keep work area clean
- Avoid accidental contact with reactive materials such as acids or chemicals, oxidisers etc.
- Use non sparking tools
- Use hand protection, face mask and foot protection

#### STORAGE

- Store in the supplied containers until used
- Keep in closed dry room or store
- The area should be suitably marked to indicate the presence an ignitable dust
- No smoking warning sign should be put up
- Avoid sparks or other source of ignition
- Keep area clean and avoid spillage
- Do not store with reactive materials



## 6. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits - Workplace Exposure  
- Longterm exposure (TLV) – 8hrs TWA – 10mg/m<sup>3</sup>

### Exposure Controls

- i) Respiratory Protection - A suitable face mask is recommended for those working with these materials. Use filter types preferably.
- ii) Eye Protection – Not essential.
- iii) Skin Contact – Wear protective clothing

## 7. FIRST AID MEASURES

- i) **Skin contact:** Wash off with plenty of water and remove contaminated clothing
- ii) **Eye contact:** Rinse with plenty of running water. Obtain medical attention if symptoms persist
- iii) **Ingestion:** If ingested rinse out mouth and then drink copious amount of water. Do **not** induce vomiting. Seek medical attention.

## 8. FIRE FIGHTING MEASURES

### Suitable Extinguishing Agents:

- i) Dry Sand: gently smother burning material with dry sand

### Unsuitable Extinguishing Agents:

- i) Water
- ii) Halogenated fire extinguisher
- iii) CO<sub>2</sub>
- iv) Foam
- v) Dry Chemical Powder

### Special hazards caused by the substance, its products of combustion or resulting gases:

- i) Aluminium Dust can combine with air to form an explosive mixture
- ii) Contact with water releases flammable gas (hydrogen)

## 9. ACCIDENTAL RELEASE MEASURES

### Environmental protection

- a. Do not dump the product into the sewage system or water courses (possible reaction releasing hydrogen)

### Measures for cleaning/collection spillages:

- i) Clean the material using non-sparking tools e.g. natural fibre broom. Avoid raising a cloud of dust
- ii) Do not flush with water

## 10. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	- Solid
<b>Form</b>	- Flaky particles
<b>Color</b>	- Grey
<b>Odour</b>	- Odourless
<b>P.H.</b>	- N/A
<b>Boiling Temp.</b>	- 2467°C (Aluminium)
<b>Melting Temp.</b>	- 660°C (Aluminium)
<b>Flash Point</b>	- N/A



<b>Autoflammability</b>	- Product is not self igniting
<b>Explosive properties</b>	- Fine Aluminium powder may be explosive if disperse into a dust cloud in air in the presence of a source of ignition. Lower Explosive Limit (LEL) – 40gm/m <sup>3</sup>
<b>Min. Ignition Temp.</b>	- Cloud 610°C Layer 320°C
<b>Oxidising properties</b>	- Will react exothermically if mixed with a strong oxidising substance and ignited
<b>Real density</b>	- 2.7gm/cm <sup>3</sup> (Aluminium)
<b>Solubility</b>	- Insoluble in water and organic solvents

#### 11. STABILITY and REACTIVITY

**Stability** - Stable when dry. No decomposition

**Reactivity** - May react with acids or oxidising agents or halogenated hydrocarbons  
Prolonged contact with water can cause a reaction releasing hydrogen gas.

#### 12. TOXICOLOGICAL INFORMATION

**Acute Toxicity** - no data available

**Chronic Toxicity** - No chronic effects know TLV – 10mg/m<sup>3</sup> (General Dust Limit)

#### 13. ECOLOGICAL INFORMATION

**Mobility/Degradability** - Will convert to aluminium oxide (alumina) during prolonged contact with water

**Ecotoxicity** - Aluminium paste is not ecotoxic  
- Generally not hazardous to water

#### 14. DISPOSAL CONSIDERATIONS

**Waste** : Dispose of in line with regional or national regulations.  
Avoid product entering watercourses/sewer systems

#### 15. TRANSPORT INFORMATION

Transport over land ADR/RID class	- 4.1
Transport over sea IMDG class	- 4.1
Transport over ICAO/IATA class	- 4.1
Packaging group	- II

#### 16. REGULATORY INFORMATION

**Label:** UN classification – 4.1 Flammable solids

**Risks:** Risks Phrase – 10, 15 R-10 Flammable

R-15 Contact with water liberates extremely flammable gas

**Safety:** Safety Phrase – 7/8, 43.6 – S-7/8 - Keep container tightly closed and dry  
S/43.6 - In case of fire, use Sand or CO<sub>2</sub>

**Never use water.**

#### 17. OTHER INFORMATION

The information contained herein is based on the present state of our knowledge. It is believed to be reliable but no representation, guarantee of any kind are made.

#### 18. CONTACT DETAILS: for any queries contact us at:

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