



MATERIAL SAFETY DATA SHEET

REVISION NO. 2, June 2007

1. PRODUCT INFORMATION

Product Name : Aluminium Paste (Mixture of Aluminium Powder coated and Diethylene Glycol)

Chemical Symbol : Al Diethylene Glycol
CAS No. : 7429-90-5 111-46-6
EINECS No. : 231-072-3 - 203-872-2

2. ITEM NO. : T01X, T02X, T03X, T04X, T05X

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS NO.	UN NO
Aluminium	7429-90-5	1309
Diethylene Glycol	111-46-6	-

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 – 5mg/m³

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

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) If dry, store in closed drums under dry conditions.
- iii) If wet, store in open topped container in an area with good ventilation and free from ignition sources.

10. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	- Semi-solid
Form	- Paste
Color	- Silvery White
Odour	- Odourless
P.H.	- N/A
Boiling Temp.	- 2467°C (Aluminium) 245°C (Diethylene Glycol)
Melting Temp.	- 660°C (Aluminium) -10.5°C (Diethylene Glycol)
Flash Point	- N/A 124°C (Diethylene Glycol)
Autoignition Temp.	224°C (Diethylene Glycol)
Autoflammability	- Product is not self igniting



Explosive properties - 40gm/m³

Min. Ignition Temp. – No Data Available

Oxidising properties - Will react exothermically if mixed with a strong oxidising substance and ignited

Real density - 2.7gm/cm³ (Aluminium) 1.12gm/cm³ (Diethylene Glycol)

Solubility - Insoluble in water Soluble in Water (Diethylene Glycol)

11. STABILITY and REACTIVITY

Stability - Stable at r.t.p.

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 known TLV – 5mg/m³

13. ECOLOGICAL INFORMATION

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

Ecotoxicity - Aluminium powder 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, 43.4/ 43.6 – S-7/8 - Keep container tightly closed and dry

S-/43.4/43.6 - In case of fire, use sand or CO₂

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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