

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : ACTIVATED ALUMINA (ALUMINA GRADE A)

1. Product and Company Identification

Product name: Activated alumina
Synonyms: Activated alumina sorbent, Alumina Grade A
Item Numbers: H026-00-050

European Contact Details

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24 h Emergency telephone number:

Chemtrec: 1-800-424-9300

2. Hazards Identification

EMERGENCY OVERVIEW

This material as supplied, when properly handled according to good working and hygienic practices, is not dangerous to human health and the environment.

However, the material is primarily used as a gas/vapour sorbent. Care should be taken when handling material that has been used in processes involving, corrosive, toxic, flammable, explosive or pyrophoric gases/vapours. Precautions must take account of the hazards associated with the process materials.

For short and long term exposure effects see Section 11 Toxicological data.

Eye Effects: Dust may cause irritation.
Skin Effects: May cause irritation.
Ingestion/Oral Effects: No effects established. Material is non toxic.
Inhalation Effects: Dust may cause mild irritation of the respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Excessive dust inhalation may aggravate pre-existing lung conditions.

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NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	1	Health	1	0 = No Hazard
Flammability	0	Flammability	0	1 = Slight Hazard
Instability	0	Reactivity	0	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe Hazard

3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Activated alumina (partially hydrated aluminium oxide)	100	1344-28-1	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

4. First Aid Measures

- Eyes: If dust enters the eye, flush with plenty of water. If irritation persists, seek medical attention.
- Skin: Wash with plenty of water. If irritation persists, seek medical attention.
- Ingestion/Oral: Give water to drink. Do not induce vomiting. Seek medical attention.
- Inhalation: After dust inhalation, remove to fresh air. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.
- Other Information: If the material is contaminated with process residue, seek immediate medical attention appropriate to the materials involved in the process.

5. Fire Fighting Measures

- Extinguishing Media: Material does not burn. Use extinguishing media appropriate to the materials in the surrounding fire.
- Fire and Explosion Hazard: Not applicable.
- Special Protective Equipment for Fire Fighters: Not applicable.

For Flammability Properties - see Section 9.

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6. Accidental Release Measures

Sweep up spilt material. If there is significant dust content, wear skin and respiratory protection and dampen the spilt material to avoid raising dust.

7. Handling and Storage

Handling: Avoid raising dust. Use good industrial hygiene.

Storage: Store in clean, dry, airtight containers.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Aluminium oxide	Based on 8 hr TWA: 10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)	None established	Based on 8 hr TWA: 10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)

Personal Protection:

Engineering Measures: Provide eyewash facilities and safety showers. Ensure adequate ventilation in areas where the product is used, to keep airborne dust low.

Respiratory Protection: Wear suitable respiratory protection whenever workplace conditions warrant the use of a respirator.

Hand/Skin Protection: Wear appropriate protective gloves and clothing as necessary to prevent contact with dust.

Eye/Face Protection: Wear appropriate safety goggles or face shield.

Hygiene Measures: Practice good workplace hygiene. Do not eat, drink or smoke while using the product. Wash hands after using the product and before eating, drinking or smoking. Immediately change clothing that is contaminated with dust.

Other/General Protection: None.

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9. Physical and Chemical Properties

Appearance and Odour	Odourless white beads or granules	Boiling point	Not applicable	°C/°F
pH (as supplied)	Neutral to slightly alkaline reaction in water	Melting point	2050 / 3722	°C/°F
Solubility in Water	Insoluble	Auto Ignition	Not applicable	°C/°F
Volatile Content by Volume	None. Material does absorb gases/vapours which may subsequently be released	Flash point	Not applicable	°C/°F
Specific Gravity	0.8			
Vapour Pressure (mbar)	No data available	Vapour Pressure (Torr)	No data available	

10. Stability and Reactivity

Stability:	Stable.
Material/Conditions to Avoid:	None known.
Hazardous Decomposition:	None.
Hazardous Polymerisation:	Will not occur.

11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 2 Hazards Identification.

Animal data:

LD50 value: No data available.

LC50 value: No data available.

Carcinogenicity:

No known carcinogenic hazardous effects.

12. Ecological Information

Aluminium oxide possess low water solubility. It is chemically inert. In small amounts it is unlikely to pose a threat to aquatic life.

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13. Disposal Considerations

Dispose of according to national and local regulations. The material as supplied is not classified as hazardous, dangerous or toxic. Approved landfill sites can be used.

Note that used material which is contaminated with process materials may have different hazards/properties from the material as supplied. Dispose of used material in accordance with the nature of the contamination.

14. Transport Information

This product is not classified as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable	Not applicable
Shipping Label	Not applicable	Not applicable	Not applicable

15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

Risk Phrases: Not applicable.

Safety Phrases: Not applicable.

Symbols: None.

United States Regulatory Information

All ingredients contained in this product are included on the EPA TSCA Chemical Substance Inventory.

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

Canadian Regulatory Information

All ingredients contained in this product are included on the Canadian DSL.

WHMIS Classification: Not Classified.

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16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Sources of information for this data sheet:

- GeeJay Chemicals "ACTIVATED ALUMINA" Material Safety Data Sheet. Revision date: June 2009.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; **ANSI** - American National Standards Institute; **Canadian TDG** - Canadian Transportation of Dangerous Goods; **CAS** - Chemical Abstracts Service; **Chemtrec** - Chemical Transportation Emergency Center (US); **DSL** - Domestic Substances List; **EH40 (UK)** - HSE Guidance Note EH40 Occupational exposure limits; **EPA** - Environmental Protection Agency; **EPCRA** - Emergency Planning and Community Right-to-Know Act; **EU** - European Union; **HMIS** - Hazardous Material Information Service; **LC** - Lethal Concentration; **LD** - Lethal Dose; **NFPA** - National Fire Protection Association; **OSHA** - Occupational Safety and Health Administration, US department of Labour; **PEL** - Permissible exposure limit; **SARA (Title III)** - Superfund Amendments and Reauthorization Act; **SARA 313** - Superfund Amendments and Reauthorization Act, Section 313; **TLV** - threshold limit value; **TSCA** - Toxic Substances Control Act Public Law 94-469; **TWA** - Time-Weighted Average; **US DOT** - US Department of Transportation; **WHMIS** - Workplace Hazardous Materials Information System.

Revisions:

Aug. 2010 - Data Sheet updated to reflect the latest supplier safety information.

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturers data; the accuracy of this information is the responsibility of the manufacturer. Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon, this data sheet.