

PRODUCT NAME : ALUMINA GRADE A (ACTIVATED ALUMINA)

1. Product and Company Identification

Product Name: Activated alumina
Synonyms: Activated alumina sorbent,
Item Numbers : H026-00-050

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2. 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 (67/548/EEC, 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".

3. Hazards Identification

EMERGENCY OVERVIEW

This material 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 sorbent 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.

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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.

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

4. First Aid Measures

Eyes: If dust enters the eye, flush with plenty of water. If irritation persists, seek medical advice.

Skin: Wash with plenty of water *.

Ingestion/Oral: Give water to drink. Seek medical advice *.

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 medical advice appropriate to the materials involved in the process.

5. Fire Fighting Measures

Extinguishing Media: Material does not burn. Use extinguishing media appropriate to other materials in the locality.

Fire and Explosion Hazard: Not applicable.

Special Protective Equipment for Fire Fighters: Not applicable.

For Flammability Properties - see Section 9

6. Accidental Release Measures

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

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Handling: avoid raising dust.

Storage: store in clean, dry, air tight containers.

8. Exposure Controls/Personal Protection**Exposure Limits**

Ingredient	ACGIH – TLV	OSHA – PEL	Occupational Exposure Limits EH40 (UK)
Activated alumina	10 mg/m ³ **	15 mg/m ³ (total) 5 mg/m ³ (respirable)	10mg/m ³ (total dust) TWA 5mg/m ³ (respirable dust)

** Value is for particulate matter containing no asbestos and < 1% crystalline silica.

Personal Protection:

Engineering Measures: None required.

Respiratory Protection: Wear dust mask where the material includes significant dust.

Hand/Skin Protection: Wear gloves.

Eye/Face Protection: Wear goggles.

Hygiene Measures: Practice good workplace hygiene. Do not eat or smoke when handling. Wash hands after handling and before eating.

Other/General Protection: None.

9. Physical and Chemical Properties

Appearance and Odour	Odourless white balls 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.

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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 3 Hazards Identification.

Animal Data:

LD50 value: No data available.

LC50 value: No data available.

Carcinogenicity:

No known carcinogenic hazardous effects.

12. Ecological Information

Aluminium oxides possess low water solubility. They are chemically inert. In small amounts they are unlikely to pose a threat to aquatic life.

13. Disposal Considerations

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

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 the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : No

Risk Phrases : Not applicable

Safety Phrases : Not applicable

Symbols : None

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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

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Source of information for this data sheet:

- GeeJay Chemicals Material Safety Data Sheet for Activated alumina. Reference ALUMINA. SDS 1. 98.

Glossary : CAS, Chemical Abstracts Service; NFPA, National Fire Protection Association; HMIS, Hazardous Material Information Service; LD, Lethal Dose; LC, Lethal Concentration; ACGIH, American Conference of Governmental Industrial Hygienists; TLV, threshold limit value; OSHA, Occupational Safety and Health Administration, US department of Labour; PEL, Permissible exposure limit; EH40 (UK), HSE Guidance Note EH40 Occupational exposure limits; PPM, parts per million; TWA, Time-Weighted Average; STEL, Short Term Exposure Limit; Canadian TDG, Canadian Transportation of Dangerous Goods; US DOT, US Department of Transportation. HSDB, Hazardous Substances Data Bank; RTECS, Registry of Toxic Effects of Chemical Substances; CHEMID, Chemical Identification; DSL, Domestic Substances List ; TSCA, Toxic Substances Control Act Public Law 94-469: CERCLA, Comprehensive Environmental Response, Compensation and Liability Act; EPCRA, Emergency Planning and Community Right-to-Know Act; CAA, Clean Air Act; US, SARA (Title III), Superfund Amendments and Reauthorization Act.; SARA 313, Superfund Amendments and Reauthorization Act, Section 313; EHS, Extremely Hazardous Substance; WHMIS, Workplace Hazardous Materials Information System.

Revisions

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. BOC Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon this data sheet.