

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Product name: Activated Alumina  
Other means of identification: Aluminium Oxide, Calcined  
Item numbers: H026-00-050

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals  
Uses advised against: No data available.

#### 1.3 Details of the supplier of the safety data sheet

##### UK contact details

Edwards, Innovation Drive, Burgess Hill, West Sussex,  
RH15 9TW, United Kingdom

##### General enquiries

Tel: +44 (0)8459 212223  
Email: info@edwardsvacuum.com

##### US contact details

Edwards, 6416 Inducon Drive West, Sanborn,  
New York, 14132, USA

##### General enquiries

Toll Free: 1-800-848-9800

#### 1.4 Emergency telephone number

Chemtrec: 1-800-424-9300

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

GHS classification: Substance.  
Classification according to Regulation (EC) No. 1272/2008: Not classified as hazardous.  
Classification according to Directive 1999/45/EC: Not classified as hazardous.

#### 2.2 Label elements

Hazard pictograms: Not applicable.  
Signal words: Not applicable.  
Hazard statements: Not applicable.  
Precautionary Statements: Not applicable.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### 2.3 Other hazards

PBT criteria: No data available.

vPvB criteria: No data available.

Other hazards which do not result in a classification: No data available.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Substance *	CAS No	Hazard class**	Risk phrase / Hazard Statements*
Aluminium Oxide	1344-28-1	Not applicable	Not applicable

\*Hazard class, Risk phrase and Hazard Statements. 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".

Full text for the declared risk phrases and hazards statements is given in Section 16.

### 3.2 Mixtures

Not applicable.

## SECTION 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

Eyes: Rinse thoroughly with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention if symptoms persist.

Skin: Wash skin with soap and plenty of water for at least 15 minutes. Seek medical attention if symptoms persist.

Ingestion/Oral: If swallowed, seek medical attention. Do not induce vomiting.

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.

General advice: Treat symptomatically.

## SAFETY DATA SHEET (SDS)

### PRODUCT NAME : ACTIVATED ALUMINA

#### 4.2 Most important symptoms and effect, both acute and delayed

Potential acute health effects:

Eyes:	May causes irritation.
Skin:	May causes irritation.
Ingestion / Oral:	No data available.
Inhalation:	Inhalation of dust may cause irritation of the respiratory tract.
Over-exposure symptoms:	
Eyes:	No data available.
Skin:	No data available.
Ingestion / Oral:	No data available.
Inhalation:	No data available.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available.

### SECTION 5. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: No data available.

#### 5.2 Special hazards arising from the substance or mixture

Fire and explosion hazard: No data available.

Hazardous combustion products: This product is non combustible and as such does not have any associated hazardous combustion products.

#### 5.3 Advice for fire-fighters

Special precautions for fire-fighters: No data available.

Special protective equipment for fire-fighters: Firefighters should wear appropriate protective equipment and Self-Contained Breathing Apparatus (SCBA) with a full face-piece operated in positive pressure mode.

For Flammability Properties - see Section 9.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: Put on appropriate personal protective equipment and evacuate personnel to safe areas. Avoid inhalation and contact with eyes and skin.

For emergency responders: No data available.

#### **6.2 Environmental precautions**

Prevent release of the product into the environment.

#### **6.3 Methods and material for containment and cleaning up**

Pick up and arrange disposal without creating dust. Use vacuum suction removal or sweep/shovel into bags. Keep product dry. Keep in suitable closed containers for disposal.

#### **6.4 Reference to other sections**

Refer to Section 8 for information on personal protective equipment.

Refer to Section 13 for information on disposal considerations.

### **SECTION 7. HANDLING AND STORAGE**

#### **7.1 Precautions for safe handling**

Ensure Personal Protective Equipment is used whenever handling the product, see Section 8. Avoid eating, drinking and smoking in areas where the product is used. Practice good hygiene. Wash hands after use and prior to consuming food and drink.

If the contents are exposed, avoid inhalation, ingestion and contact with skin and eyes. Provide general ventilation when handling.

#### **7.2 Conditions for safe storage, including any incompatibilities**

DO NOT store together with food. Store in original, sealed containers protected from direct sunlight in a dry, cool, well ventilated area away from oxidising agents, acids, bases and sources of ignition.

#### **7.3 Specific end use(s)**

No data available.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

Ingredient	ACGIH - TLV	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Aluminium Oxide	No data available	15 mg/m <sup>3</sup> - 8 hr TWA (Total dust) 5 mg/m <sup>3</sup> - 8 hr TWA (Respirable fraction)	10 mg/m <sup>3</sup> - 8 hr TWA (Total dust) 4 mg/m <sup>3</sup> - 8 hr TWA (Respirable fraction)

#### 8.2 Exposure controls

Appropriate engineering controls: Ensure eyewash stations and safety showers are available close to the workstation location. Provide general ventilation when handling.

Individual protection measures:

Eye/Face Protection: Safety glasses with side shields.

Hand/Skin Protection: Wear suitable protective clothing such as gloves and overalls/coveralls appropriate to the risk at the specific workplace.

Respiratory Protection: Wear a dust mask when processing material, or when dust/particles may be present. A CEN or NIOSH approved respirator is recommended if there is a possibility of dust generation above permissible exposure limits.

Hygiene Measures: Practice good hygiene. Wash face, hands and any exposed skin thoroughly after handling. Immediately remove all soiled and contaminated clothing. Do not eat, drink or smoke while handling the product.

Other/General Protection: None.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	White solid	Melting point / freezing point	2,000 / 3,632	°C / °F
Odour	Odourless	Initial boiling point and boiling range	2,980 / 5,396	°C / °F
Odour threshold	Not applicable	Flash point	Not applicable	°C / °F
pH	No data available	Upper/lower flammability or explosive limits	No data available	°C / °F
Evaporation rate	No data available	Vapour pressure	Negligible	Torr
Flammability (solid, gas)	No data available	Vapour density	No data available	g/cm <sup>3</sup>
Solubility(ies)	No data available	Relative density	No data available	g/cm <sup>3</sup>
Partition coefficient: n-octanol/water	No data available	Auto-ignition temperature	No data available	°C / °F
Explosive properties	No data available	Decomposition temperature	No data available	°C / °F
Oxidising properties	No data available	Viscosity	No data available	cSt

#### 9.2 Other information

Molecular weight: 101.96.

Molecular formula: Al<sub>2</sub>O<sub>3</sub>

### SECTION 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

No data available.

#### 10.2 Chemical stability

Stable under normal conditions of use.

#### 10.3 Possibility of hazardous reactions

None.

#### 10.4 Conditions to avoid

Incompatible materials and excess heat. Avoid dust formation.

#### 10.5 Incompatible materials

Strong oxidising agents, acids and bases.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### 10.6 Hazardous decomposition products

None under normal conditions of use.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity:	LD50 Oral: 5,000 mg/kg (rat)
Irritation:	No data available.
Corrosivity:	No data available.
Sensitisation:	No data available.
Repeat dose toxicity:	No data available.
Carcinogenicity:	Not considered a carcinogen.
Mutagenicity:	No data available.
Specific Target Organ Toxicity (STOT) - single exposure:	No data available.
STOT - repeated exposure:	No data available.
Aspiration hazard:	No data available.
Toxicity for reproduction:	No data available.

### Information on likely routes of exposure

No data available.

### Symptoms related to the physical, chemical and toxicological characteristics

Eye Effects:	May causes irritation.
Skin Effects:	May causes irritation.
Ingestion/Oral Effects:	No data available.
Inhalation Effects:	Inhalation of dust may cause irritation of the respiratory tract.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data available.

### Other information

No data available.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

No data available.

#### 12.2 Persistence and degradability

No data available.

#### 12.3 Bioaccumulative potential

No data available.

#### 12.4 Mobility in soil

No data available.

#### 12.5 Results of PBT and vPvB assessment

PBT: No data available.

vPvB: No data available.

#### 12.6 Other adverse effects

No data available.

### SECTION 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Product: Dispose of the product in compliance with all applicable local and national regulations.

Packaging: Dispose of the packaging in compliance with all applicable local and national regulations.



## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### SECTION 14. TRANSPORT INFORMATION

#### 14.1 UN number

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

#### 14.2 UN proper shipping name

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

#### 14.3 Transport hazard class

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

#### 14.4 Packing group

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

#### 14.5 Environmental hazards

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

#### 14.6 Special precautions for user

ADR/RID	IMDG	IATA	United States DOT
Not applicable	Not applicable	Not applicable	Not applicable

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable.

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### SECTION 15. REGULATORY INFORMATION

#### 15.1 Safety, health and environment regulations/legislation specific for the substance or mixture

##### European

This product has been classified in accordance with EU Regulation No 1907/2006 (REACH) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

German Federal Water Management Act: Water contaminating class - No data available.

##### United States

This substance is on the U.S. Toxic Substances Control Act (TSCA).

##### SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This substance is not 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 substance is not known to the State of California to cause cancer or reproductive toxicity.

##### Canadian

WHMIS Classification: Not applicable.

This substance is included in the Canadian DSL.

#### 15.2 Chemical safety assessment

No data available.

### SECTION 16. OTHER INFORMATION

This SDS is compiled in accordance with ANSI Z400.1, Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010) concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

#### 16.1 Full text of abbreviated statements and phrases

Not applicable.

#### 16.2 NFPA / HMIS hazard codes

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

## SAFETY DATA SHEET (SDS)

**PRODUCT NAME : ACTIVATED ALUMINA**

### 16.3 Sources of information for this data sheet

- Fisher Scientific "Aluminium Oxide, Calcined" Safety Data Sheet. Revision date: 3rd May 2012. Revision: 2.

### 16.4 Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; ADN - European agreement concerning the international carriage of dangerous goods by inland waterways ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE - Acute Toxicity Estimate; CAS No. - Chemical Abstracts Service number; CEN - European Committee for Standardization; CVD - Chemical vapour deposition; EC No. - EINECS and ELINCS Number (see also EINECS and ELINCS); EC<sub>50</sub> - Median effective concentration; ECHA - European Chemicals Agency; EINECS - European Inventory of Existing Commercial Substances; ELINCS - European List of Notified Chemical Substances; IATA - International carriage of dangerous goods by air; IMDG - International carriage of dangerous goods by sea; LC<sub>50</sub> - Median lethal concentration; LD<sub>50</sub> - Median lethal dose; NIOSH - National Institute for Occupational Safety and Health (US); OECD - Organisation for Economic Co-operation and Development; OEL - Occupational exposure limit; PBT - Persistent, bioaccumulative, toxic chemical; PEL - Permissible exposure limit; RID - International carriage of dangerous goods by rail; STEL - Short term exposure limit, 15 minute reference period; STOT - Specific target organ toxicity; TLV - Threshold limit value; TWA - Time weighted average, 8 hour reference period; vPvB - Very persistent, very bioaccumulative chemical

### 16.5 Revisions

August 2010 - This document has been updated to reflect the latest supplier safety information.

June 2012 - This document has been updated to reflect the latest regulatory information.

November 2012 - European and US contact details updated.

April 2014 - Data Sheet updated to conform to Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010) and GHS.

January 2016 - Contact details updated. Revision date not changed to preserve 2-yearly SDS review date.

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