



## Activated alumina MSDS

### SECTION 1: Identification of the substance/mixture and of the company

#### *Product identifier:*

Substance name: Aluminium oxide  
Molecular Formula:  $\text{Al}_2\text{O}_3 \cdot n\text{H}_2\text{O} (0 < n \leq 0.8)$   
Molecular Weight: 102  
CAS No: 1344-28-1  
EC No: 215-691-6

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

Relevant identified uses: Industrial desiccant use.  
Uses advised against: Not available.

#### *Details of the supplier of the substance or mixture:*

Supplier(Manufacturer): Zibo XiangRun Environment Engineering Co.Ltd.  
Street address: No.16, Hi-Tech Industrial Park, Development Zone, Zibo City,  
Shandong Province 255000, P. R. China  
E-mail: info@xradsorbent.com  
Telephone: (86)533-3037068  
Fax: (86)533-3037069

#### *Emergency telephone number:*

(86)13583393236(Only office hours available.)

### SECTION 2: Hazards identification

#### *Classification of the substance or mixture:*

##### **Classification according to Regulation (EC) No 1272/2008[CLP]**

The product is not classified as hazardous under Regulation (EC) No 1272/2008[CLP].

##### **Classification according to Council Directive 67/548/EEC**

The product is not classified as hazardous under Council Directive 67/548/EEC.

#### *Label elements:*

##### **Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]**

No label information available. The product is not classified as hazardous under Regulation (EC) No 1272/2008 [CLP].

#### *Other hazards:*

No information available.

### SECTION 3: Composition/information on ingredients

REACH No: Not available.  
EC No: 215-691-6  
CAS No: 1344-28-1



**Purity:** ≥93%  
**Synonyms:** Alumina

#### **SECTION 4: First aid measures**

***Inhalation:***

If inhaled, remove to fresh air. If not breathing give artificial respiration.

***Skin contact:***

Wash skin with soap and copious amounts of water.

***Eyes contact:***

Flush eyes with copious amounts of water.

***Ingestion:***

If swallowed, wash out mouth with water provided person is conscious.

***Most important symptoms and effects, both acute and delayed***

May cause minor irritation to lungs & eyes.

***Indication of the immediate medical attention and special treatment needed***

Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material. Attending physician should treat exposed patients symptomatically.

#### **SECTION 5: Fire-fighting measures**

***Extinguishing media:***

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

**Unsuitable extinguishing media:** Not available.

***Special hazards arising from the substance or mixture:***

Not combustible.

***Advice for fire-fighters:***

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

#### **SECTION 6: Accidental release measures**

***Personal precautions, protective equipment and emergency procedures:***

Avoid inhalation of dusts. Ensure adequate ventilation

***Environmental precautions:***

Do not allow material to be released to the environment without the proper governmental permits.

***Methods and material for containment and cleaning up:***

Sweep up, place in a bag and hold for waste disposal.

Avoid raising dust.

***Reference to other sections:***

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**SECTION 7: Handling and storage*****Precautions for safe handling:***

Do not breathe dust. Provide appropriate exhaust ventilation at places where dust is formed.

***Conditions for safe storage, including any incompatibilities:***

Store in a tightly closed container.

Store in a cool, dry, well-ventilated area away from incompatible substances.

***Specific end use(s):***

No special requirements.

**SECTION 8 : Exposure controls/personal protection*****Control parameters:***

***Exposure limit values:*** CAS# 1344-28-1

|                   | Limit value - Eight hours |   | Limit value - Short term |  |
|-------------------|---------------------------|---|--------------------------|--|
|                   | ppm                       | mg/m <sup>3</sup>                             | ppm                      | mg/m <sup>3</sup>                            |
| Belgium           | -                         | 10  | -                        | 2  |
| Denmark           | -                         | 5 inhalable aerosol<br>2 respirable aerosol   | -                        | 10 inhalable aerosol<br>4 respirable aerosol |
| France            | -                         | 10 respirable aerosol                         | -                        | -  |
| Germany<br>(DFG)  | -                         | 4 inhalable aerosol<br>1.5 respirable aerosol | -                        | -  |
| Hungary           | -                         | 6 respirable aerosol                          | -                        | -  |
| Poland            | -                         | 2   | -                        | 16   |
| Spain             | -                         | 10 inhalable aerosol<br>5 respirable aerosol  | -                        | -  |
| Sweden            | -                         | 5 inhalable aerosol<br>2 respirable aerosol   | -                        | -  |
| Switzerland       | -                         | 3 respirable aerosol                          | -                        | -  |
| USA -<br>OSHA     | -                         | 15 total dust<br>5 inhalable dust             | -                        | -  |
| United<br>Kingdom | -                         | 10 inhalable aerosol<br>4 respirable aerosol  | -                        | -  |

***Exposure controls:******Appropriate engineering controls:***

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

***Individual protection measures - personal protective equipment:***

Eye/face protection: Chemical safety glasses and face protection

Skin protection: Wear Compatible chemical-resistant gloves and clothing to prevent skin exposure.

Respiratory protection: Use breathing protection with high concentrations.

***Environmental exposure controls:***



Do not allow material to be released to the environment without the proper governmental permits.

## SECTION 9: Physical and chemical properties

### *Information on basic physical and chemical properties:*

|  |                                   |
|--|-----------------------------------|
| Appearance:                                | bead                              |
| Colour:                                    | White.                            |
| Odour:                                     | Odourless.                        |
| pH:  | 7-8 , 100 g/l water, at 20 °C     |
| Melting point:                             | 2050 °C                           |
| Boiling point:                             | 2980 °C                           |
| Flash point:                               | Not applicable.                   |
| Vapour pressure:                           | 1 mmHg at 2158 °C                 |
| Density:                                   | 0.75 g/cm <sup>3</sup> , at 20 °C |
| Bulk density (kg/m <sup>3</sup> )          | ca.750 kg/m <sup>3</sup>          |
| Water Solubility:                          | Insoluble, at 20 °C               |
| Partition coefficient,<br>n-octanol/water: | No data available.                |
| Auto-ignition Temperature<br>( °C):        | Not applicable.                   |
| Explosive properties:                      | Not applicable.                   |

## SECTION 10: Stability and reactivity

### *Reactivity:*

No data available.

### *Chemical stability:*

Stable under recommended temperatures and pressures.

### *Possibility of hazardous reactions:*

Exothermic reaction with water.

### *Conditions to avoid:*

Exposure to moisture.

### *Incompatible materials:*

Strong acids, Strong bases, Chlorine trifluoride, Ethylene oxide, Halogenated hydrocarbon, Oxygen difluoride, Sodium nitrate, Vinyl compounds.

### *Hazardous decomposition products:*

No information available.

## SECTION 11: Toxicological information

### *Toxicokinetics, metabolism and distribution:*

No data available.

### *Information on toxicological effects:*

#### *Acute toxicity:*

No data available.

#### *Skin corrosion/irritation:*

Skin, rabbit: No irritation.

#### *Serious eye damage/irritation:*



Eyes, rabbit: No irritation.

***Respiratory or skin sensitization:***

No data available.

***CMR effects (Carcinogenicity, Mutagenicity and Toxicity for Reproduction):***

A4: Not classifiable as a human carcinogen.(HSDB)

***STOT-single exposure and repeated exposure:***

No data available.

***Additional Information:***

RTECS #: BD1200000

## **SECTION 12: Ecological information**

***Toxicity:***

No data available.

***Persistence and degradability:***

No data available.

***Bioaccumulative potential:***

No data available.

***Mobility in soil:***

No data available.

***Results of PBT and vPvB assessment:***

No data available.

## **SECTION 13: Disposal considerations**

***Waste treatment methods:***

Observe all federal, state, and local environmental regulations.

***Additional information:***

Disposal must be made according to official regulations.

## **SECTION 14: Transport information**

***Land transport (ADR/RID):***

This product is not regulated as a hazardous material or dangerous goods for transportation.

***Sea transport (IMDG-Code):***

This product is not regulated as a hazardous material or dangerous goods for transportation.

***Air transport (ICAO-TI/IATA-DGR):***

This product is not regulated as a hazardous material or dangerous goods for transportation.

## **SECTION 15: Regulatory information**

***Safety, health and environmental regulations/legislation specific for the substance or mixture:***

| <i>CAS #</i> | <i>EU-EINECS</i> | <i>US-TSCA</i> | <i>Canada-DSL</i> | <i>Australia-AIC</i><br><i>S</i> | <i>Korea-E</i><br><i>CL</i> |
|--------------|------------------|----------------|-------------------|----------------------------------|-----------------------------|
| 1344-28-1    | Listed           | Listed         | Listed            | Listed                           | Listed                      |

***Chemical Safety Assessment:***



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A chemical safety assessment has not been carried out for the substance by the supplier.

## **SECTION 16: Other information**

### ***Revision Information:***

Date of the previous revision: Not applicable.

Date of this revision: 06/09/2012

Revision summary: New SDS

### ***Abbreviations and acronyms:***

|         |   |
|---------|---|
| GHS:    | Globally Harmonized System of Classification and Label of Chemicals.  |
| CLP:    | EU regulation (EC) No 1272/2008 on classification, label and packaging of chemical substances and mixtures. |
| CAS:    | Chemical Abstracts Service (division of the American Chemical Society).                                     |
| EINECS: | the European Inventory of Existing Commercial chemical Substances.  |
| IARC:   | International agency for research on cancer.  |
| RID:    | European Rail Transport.  |
| IMDG:   | International Maritime Code for Dangerous Goods.  |
| IATA:   | International Air Transport Association.  |
| OSHA:   | The United States Occupational Safety and Health Administration.  |
| DSD:    | Dangerous Substance Directive (67/548/EEC).   |
| TSCA:   | Toxic Substances Control Act, The American chemical inventory.  |
| RCRA:   | The Resource Conservation and Recovery Act of United States.  |
| CERCLA  | The Comprehensive Environmental Response, Compensation, and Liability Act of                                |
| :       | United States.  |
| SARA/   | The Emergency Planning and Community Right-to-Know Act.   |
| TITLE   |   |
| III:    |   |
| DSL:    | Domestic Substances List, The Canadian chemical inventory.  |
| AICS:   | The Australian Inventory of Chemical Substances.  |
| ECL:    | Existing Chemicals List, the Korean chemical inventory.   |
| PICCS:  | Philippine Inventory of Chemicals and Chemical Substances.  |
| MITI:   | Ministry of International Trade and Industry.   |
| IECSC:  | Inventory of existing chemical substances in China.   |

### ***Further information:***

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

### ***Data sources:***

Merck Index.

International Chemical Safety Cards (ICSC).