

## Safety Data Sheet

### Non-hard Aluminum sulfate

#### Section 1 - Identification of the substance/preparation and of the company/undertaking

##### Product Identifier

**Product name :** Non-hard Aluminum sulfate

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

**Identified uses :** Mainly used for advanced titanium dioxide coating and senior paper, can also be used for industrial water, tanning, concrete and building materials etc.

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

**Applicant :** ZIBO BOSHAN WIN WIN CHEMICALS CO.,LTD

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##### Emergency telephone number

**Emergency Phone #** +86- 533-4200240

#### Section 2 - Hazards Identification

##### Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Serious Eye Damage (Category 1)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Xi,R41

##### Label elements

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

### Pictogram



**Signal word**          Danger

### Hazard statement(s)

H318 Causes serious eye damage.

### Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Contents/container handling to approved waste treatment plants.

**Supplemental Hazard Statements**          none

**According to European Directive 67/548/EEC as amended.**

### Hazard symbol(s)



### R-phrases(s)

R 41 Risk of serious damage to eyes.

### S-phrases(s)

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Other hazards**          No information available

### Section 3 – Composition/Information on Ingredient

#### Chemical composition

Component	CAS No.	Formula	Composition	EC No.	Classification	GHS CLASS
Aluminium sulphate	10043-01-3	Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> ·X H <sub>2</sub> O	99.995%~ 99.998%	233-135-0	Xi, R41	Eye Dam. 1 H318
Iron	7439-89-6	Fe	0.0020%~ 0.005%	231-096-4	F, R11	Flam. Sol. 1 H228

**Note:** The composition of Aluminium sulphate (calculation based Al<sub>2</sub>O<sub>3</sub>) is 15.8%~17%.

**For the full text of H-Statements and R-Phrases mentioned in this Section, see Section 16.**

### Section 4-First Aid Measures

#### Description of first aid measures

**Eye Contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. Occasionally lifting the upper and lower eyelids. Get medical attention if irritation occurs.

**Skin Contact:** Immediately wash skin with soap and copious amounts of water while removing contaminated clothing and shoes. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation develops and persists, seek medical attention.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Wash out mouth with water. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If irritation develops and persists, seek medical attention. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Notes to Physician:** Treat symptomatically.



## Section 5 – Fire-Fighting Measures

### **Extinguishing media**

#### **Suitable Extinguishing Media:**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Under fire conditions toxic fumes may be released. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Keep product and empty container away from heat and sources of ignition.

#### **Advice for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6 - Accidental Release Measures

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

If packages rupture. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Spilled or released at long industrial condition: Remove ignition sources, Keep away from heat and flame, evacuate area.

Avoid dust formation. Avoid breathing dust. Shut off source of the leak only if it is easy to do so.

Do not get water inside containers.

#### **Environmental precautions**

Take precautions to ensure product does not contaminate the ground or enter the drainage system, surface water, sanitary sewer or ground water system.

#### **Methods and materials for containment and cleaning up**

Sweep up and place in suitable containers for recycle or disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

## Section 7 - Handling and Storage

### Precautions for safe handling

Dust generated in handling of this product can be explosive if sufficient quantities are mixed in air. In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Avoid physical damage to the container. Empty containers retain product residue, (dust and/or solid), and can be dangerous. Ground and bond containers when transferring material. Take necessary action to avoid static electricity discharge. Do not eat, drink or smoke while handling the product. Do not allow water to get into the container.

### Conditions for safe storage, including any incompatibilities

Keep away from heat and flame. Store in a cool, dry, well-ventilated away from incompatible substances and foodstuff containers. Store in a tightly closed container. Keep away from moisture and water. Keep out of the reach of children.

### Specific end uses

No data available

## Section 8 - Exposure Controls/Personal Protection

### Control parameters

#### Exposure limits:

CAS# 10043-01-3:

ACGIH: TLV - TWA: 2 mg(Al)/m<sup>3</sup>

Australia- TWA: 2 mg(Al)/m<sup>3</sup>

Belgium- TWA: 2 mg(Al)/m<sup>3</sup>

France- VME: 2 mg(Al)/m<sup>3</sup>

Korea- TWA: 2 mg(Al)/m<sup>3</sup>

New zealand- TWA: 2 mg(Al)/m<sup>3</sup>

Norway- TWA: 2 mg(Al)/m<sup>3</sup>

Russia- TWA: 0.5 mg(Al)/m<sup>3</sup>; STEL: 2 mg(Al)/m<sup>3</sup>

Sweden- TWA: 1 mg(Al)/m<sup>3</sup>

CAS# 7439-89-6:

Russia- TWA: 10 mg/m<sup>3</sup>

### Engineering Controls

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Personal Protective Equipment

**Eyes Protection:** Use chemical safety goggles and/or a full face shield.

**Skin Protection:** Wear appropriate protective gloves.

**Body Protection:** Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Respirators Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Other Protection:** Do not eat, smoke or drink when material is handled, processed or stored. Wash hands carefully before eating or smoking. To maintain good health habits.

## Section 9 - Physical and Chemical Properties

<b>Appearance</b>	Form: Granular Colour: White or Light yellow
<b>Odour</b>	Slight odor
<b>Odour Threshold</b>	No data available
<b>pH</b>	≥3.0
<b>Melting point/freezing point</b>	770°C
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper/lower flammability or explosive limits</b>	No data available



<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Water solubility</b>	Water-Reactive
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition temperature</b>	No data available
<b>Decomposition temperature</b>	770°C
<b>Viscosity</b>	No data available

## Section 10 - Stability and Reactivity

<b>Reactivity</b>	No data available
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	
Hazardous Polymerization	Will not occur.
Hazardous Reactions	None under normal processing.
<b>Conditions to avoid</b>	Incompatible materials. Excess heat. Ignition sources. Direct sunlight. Avoid dust formation. Exposure to moisture.
<b>Incompatible materials</b>	Strong oxidizing agents, strong bases.
<b>Hazardous decomposition products</b>	May produce irritating and toxic fumes and gases. Sulphur oxides, aluminum oxide and so on.

## Section 11 - Toxicological Information

### Information on toxicological effects

#### Acute toxicity:

CAS# 10043-01-3:

Oral, mouse: LD50 = 6207mg/kg;

Oral, rat: LD50 > 5000 mg/kg;

#### Skin corrosion/irritation

No data available

**Serious eye damage/eye irritation**

CAS# 10043-01-3: Eyes - rabbit - Severe eyes irritation (10 mg/24H);

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

Aluminium sulphate - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Iron - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Potential Health Effects**

**Eye:** If applied to the eyes, this material causes severe eye damage. May lead to permanent visual defects or even loss of vision.

**Skin:** This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.

**Ingestion:** May be harmful if swallowed. Acute toxic responses to aluminium are confined to the more soluble forms. Sulfates are not well absorbed orally, but can cause diarrhoea. Concentrated solutions (over 20%) can cause burns to the mouth, bleeding stomach, loss of coordination, muscle spasms and kidney injury.

**Inhalation:** Inhalation of airborne dust may cause irritation to the mucous membrane and upper



airways. Symptoms of exposure can include coughing, sneezing and breathing difficulties. Prolonged inhalation of dusts containing high concentrations of aluminum have produced emphysema, non-nodular pulmonary fibrosis and fatalities.

### **Signs and Symptoms of Exposure**

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Repeated minor skin contact may result in numbing of fingers. Repeated minor ingestion may cause phosphate deficiency; weakening bones. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **Additional Information**

**RTECS#:** CAS# 10043-01-3: BD1700000/ CAS# 7439-89-6: NO4565500

## Section 12 - Ecological Information

### **Toxicity**

CAS# 10043-01-3: Daphnia: Daphnia magna (Water flea): LC50 = 38,2 mg/L/48h;

### **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

### **Other adverse effects**

Do not empty into drains.

## Section 13 - Disposal Considerations

### **Waste treatment methods**

**Waste from Residues / Unused Products:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**Contaminated packaging:** Contaminated packaging material should be treated equivalent to residual chemical. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

### Section 14 - Transport Information

	<b>IATA</b>	<b>IMDG</b>	<b>RID/ADR</b>
<b>Proper shipping name</b>	Not regulated	Not regulated	Not regulated
<b>Hazard class</b>	/	/	/
<b>Un number</b>	/	/	/
<b>Packing group</b>	/	/	/

### Section 15 - Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

**Canada**

All chemicals in this product are listed on Canada's DSL List.

**US Federal**

**Toxic Substance Control Act (TSCA)**

All chemicals in this product are listed on the TSCA Inventory.

### Section 16 - Additional Information

**SDS Creation Date:** Mar 09, 2015

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Eye Dam. 1: Serious Eye Damage (Category 1)

Flam. Sol. 1: Flammable solid(Category 1)

H228 Flammable solid.

H318 Causes serious eye damage.

R 11 Highly flammable.

R 41 Risk of serious damage to eyes.

Other Information:

ACGIH: (American Conference of Governmental Industrial Hygienists) ; CAS: (Chemical Abstracts Service); DSL:(the Domestic Substances List of Canada); EC:(European Commission); IARC: (International Agency for Research on Cancer) ;IATA: (International Air Transport Association) ; IMDG: (International Maritime Dangerous Goods) ;ADR: (European Agreement Concerning the International Carriage of Dangerous Goods by Road);RID: (Regulations Concerning the International Carriage of Dangerous Goods by Rail); LD50: (Lethal dose, 50 percent kill) ; NDSL: (the Non-domestic Substances List of Canada) ; NIOSH: (US National Institute for Occupational Safety and Health) ;NTP: (US National Toxicology Program) ;OSHA: (US Occupational Safety and Health) ; PEL: (Permissible Exposure Level); REL: (Recommended Exposure Limit) ; RTECS: (Registry of Toxic Effects of Chemical Substances) ; STEL: (Short Term Exposure Limit) ;TDG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations) ; TSCA: (Toxic Substances Control Act of USA) TWA: (Time Weighted Average) ;TLV: (Threshold Limit Value)