

Safety Data Sheet

Liquid Aluminum sulfate

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

Product Identifier

Product name : Liquid 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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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 ₂ (SO ₄) ₃	49.997%~ 49.999%	233-135-0	Xi, R41	Eye Dam. 1 H318
Iron	7439-89-6	Fe	0.001%~ 0.0025%	231-096-4	F, R11	Flam. Sol. 1 H228
Water	7732-18-5	H ₂ O	49.9985%~ 50.002%	231-791-2	/	/

Note: The composition of Aluminium sulphate (calculation based Al₂O₃) is 7.5%~8.5%.

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. Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention if irritation occurs.

Skin Contact: Immediately wash skin with soap and copious amounts of water while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. If irritation develops and persists, seek medical attention.

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

Inhalation: Remove from exposure and move to fresh air immediately. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if irritation develops or persists. **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:

Thermal decomposition can lead to release of irritating gases and vapors. 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 breathing dust, vapor, mist, or gas. Shut off source of the leak only if it is easy to do so. Slipping hazard; do not walk through spilled material.

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

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for 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

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Avoid prolonged or repeated exposure. Avoid physical damage to the container. Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Ground and bond containers when transferring material. Take necessary action to avoid static electricity discharge. No smoking, eating and drinking water at workplace.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated away from incompatible substances. Store in a tightly closed container. Do not store at elevated temperatures. Keep away from sources of ignition. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid storing product in direct sunlight for extended periods of time. Keep out of 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)/m³

Australia- TWA: 2 mg(Al)/m³

Belgium- TWA: 2 mg(Al)/m³

France- VME: 2 mg(Al)/m³

Korea- TWA: 2 mg(Al)/m³

New zealand- TWA: 2 mg(Al)/m³

Norway- TWA: 2 mg(Al)/m³

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Russia- TWA: 0.5 mg(Al)/m³; STEL: 2 mg(Al)/m³

Sweden- TWA: 1 mg(Al)/m³

CAS# 7439-89-6:

Russia- TWA: 10 mg/m³

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment Ensure that eyewash stations and safety showers are close to the workstation location

Personal Protective Equipment

Eyes Protection: Use chemical safety goggles and/or a full face shield when splashing is possible.

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

Appearance

Form: Liquid

Colour: Colorless or Light yellow

Odour

Slight odor

Odour Threshold

No data available

pH

≥3.0

Melting point/freezing point

No data available

Initial boiling point and boiling range

No data available

Flash point

No data available

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	Soluble
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

Section 10 - Stability and Reactivity

Reactivity	No data available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	
Hazardous Polymerization	Will not occur.
Hazardous Reactions	None under normal processing.
Conditions to avoid	Incompatible materials. Excess heat. Sources of ignition.
Incompatible materials	Strong oxidizing agents, strong bases.
Hazardous decomposition products	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

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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.

Waters- Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

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 cause irritation, redness, and corneal burns due to the compound with moisture to form sulfuric acid. Repeated or prolonged contact with irritants may cause conjunctivitis.

Skin: This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Aluminium sulphate hydrolyzes readily with moisture to form sulfuric acid which may produce irritation and eczema. Excessive formation of sulfuric acid may produce possible burns. Repeated exposure may result in sensitization.

Ingestion: May be harmful if swallowed. May cause irritation of mucous membranes in the mouth and digestive tract. Symptoms may include nausea, vomiting and diarrhea. Ingestion of a large dose

was lethal in mice. Aluminum salts, particularly concentrated solutions, may produce gingival necrosis and fatal hemorrhagic gastroenteritis, in coordination, colonic contractions, evidence of nephritis and death.

Inhalation: May be harmful if inhalation. Inhalation of vapor may be irritating to mucous membranes and upper respiratory tract. Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache. Repeated or prolonged exposure may cause bronchial irritation, leading to nocturnal wheezing, and breathlessness. Prolonged inhalation of dusts containing high concentrations of aluminum have produced emphysema, non-nodular pulmonary fibrosis and fatalities.

Signs and Symptoms of Exposure

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/ CAS# 7732-18-5:
ZC0110000

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

	IATA	IMDG	RID/ADR
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.(Aluminum sulfate solution)	Corrosive liquid, acidic, inorganic, n.o.s.(Aluminum sulfate solution)	Corrosive liquid, acidic, inorganic, n.o.s.(Aluminum sulfate solution)
Hazard class	8	8	8
Un number	UN3264	UN3264	UN3264
Packing group	III	III	III

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 the components of this material are listed on Canada's DSL List.

US Federal

Toxic Substance Control Act (TSCA)

All the components of this material 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-phrases 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)