We create chemistry

Safety data sheet

BASF Safety data sheet
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Product: **Aluminium chloride anhydrous ground**

(30041207/SDS_GEN_SG/EN)
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1. Substance/preparation and manufacturer/supplier identification

Product name:
Aluminium chloride anhydrous ground

Use: Chemical

Recommended use: Intermediate, catalyst, process chemical

Manufacturer/supplier:
BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 8322 4420
Telefax number: +65 6 334-0330
E-mail address: benny.zou@basf.com

Emergency information:
Singapore Emergency Toll-Free Number:
Telephone: 1800-723-1361
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:
Acute toxicity: Cat.5 (oral)
Skin corrosion/irritation: Cat.1B
Serious eye damage/eye irritation: Cat.1

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H303	May be harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe dust or mist.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.
Corrodes metals in the presence of water or moisture.

Reacts violently with water. Corrosive to the respiratory tract.

3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

aluminium chloride
CAS Number: 7446-70-0

Hazardous ingredients

aluminium chloride

Content (W/W): >= 75 % - <= 100 %	Acute Tox.: Cat. 5 (oral)
	Skin Corr.: Cat. 1B
CAS Number: 7446-70-0	Eye Dam.: Cat. 1

4. First-Aid Measures

General advice:
Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position).

If inhaled:
Keep patient calm, remove to fresh air. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Wipe dry. Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:
Symptoms: skin corrosion, irritates the eyes and respiratory tract
Hazards: No hazard is expected under intended use and appropriate handling.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:
dry powder

Unsuitable extinguishing media for safety reasons:
water

Specific hazards:
The substances/groups of substances mentioned can be released if the product is involved in a fire.

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:
Breathing protection required.

Environmental precautions:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants.

Methods for cleaning up or taking up:
For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.
For residues: Rinse away with water.
Avoid raising dust.

7. Handling and Storage

Handling

Handle in accordance with good industrial hygiene and safety practice. Keep container tightly sealed. Before opening venting of container is recommended; beware of escaping gases and vapours. Avoid dust formation. Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:
The substance/product is non-combustible.

Storage

Suitable materials for containers: glass, enamelled, Carbon steel (Iron), polyvinylchloride (PVC), Stainless steel 1.4301 (V2)
Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Keep container dry.

Storage stability:
Product is hygroscopic.
Improper storage may result in pressure build up in the drums.

8. Exposure controls and personal protection

Components with occupational exposure limits

aluminium chloride, 7446-70-0;

Personal protective equipment

Respiratory protection:
Gas filter for gases/vapours of inorganic compounds (e.g. EN 14387 Type B) Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
polyvinylchloride (PVC) - 0.7 mm coating thickness
nitrile rubber (NBR) - 0.4 mm coating thickness
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.

Body protection:
chemical-protection suit (f.e. according to EN 14605)

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form:	powder	
Colour:	yellowish	
Odour:	pungent	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	2.4 (100 g/l)	(OECD Guideline 122)
Melting point:	190 °C (2,500 hPa)	
Boiling point:	(1,013.25 hPa) Study scientifically not justified., Sublimation	
Sublimation temperature:	181.2 °C (1,013.25 hPa) Literature data.	
Flash point:	not applicable, the product is a solid	

Evaporation rate:		
	not applicable, The product is a non-volatile solid.	
Flammability (solid/gas):	not highly flammable	(Regulation 440/2008/EC, A.10)
Lower explosion limit:		
	For solids not relevant for classification and labelling.	
Upper explosion limit:		
	For solids not relevant for classification and labelling.	
Ignition temperature:		
	not determined	
Thermal decomposition:	No decomposition if correctly stored and handled.	
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
	not self-igniting	Test type: Self-ignition at high temperatures. (Method: Regulation 440/2008/EC, A.16)
Self heating ability:	It is not a substance capable of spontaneous heating.	
SADT:	No data available.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	not fire-propagating	(Regulation 440/2008/EC, A.17)
Vapour pressure:	< 1 mbar (20 °C) Literature data.	
Density:	2.44 g/cm3 (25 °C) Literature data.	
Relative density:	2.48 Literature data.	(other)
Bulk density:	1,200 kg/m3 1,200 kg/m3	
Relative vapour density (air):		
	The product is a non-volatile solid.	
Solubility in water:	Literature data. 450 g/l (20 °C)	
Hygroscopy:	hygroscopic	
Partitioning coefficient n-octanol/water (log Pow):		
	Study scientifically not justified.	

Adsorption/water - soil:	KOC: 3700 Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.	(other)
Adsorption/water - soil:	KOC: 28661 The data refer to Kd value, Koc/log Koc value not appropiate for assessment. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.	
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Viscosity, dynamic:	Study scientifically not justified.	
Viscosity, kinematic:	not applicable, the product is a solid	
Molar mass:	133.34 g/mol	

Particle characteristics

Particle size distribution:	10.0 µm	(D10, ISO 13320-1)
	118.0 µm	(D90, ISO 13320-1)
	430.0 µm	(D50, ISO 13320-1)
Particle size distribution:	fine particles -	

Specific Surface Area:
No data available.

Particle Shape:
No data available.

Dustiness:
No data available.

10. Stability and Reactivity

Conditions to avoid:
See SDS section 7 - Handling and storage. Avoid humidity.

Thermal decomposition: No decomposition if correctly stored and handled.

Substances to avoid:
water

Corrosion to metals: Corrodes metals in the presence of water or moisture.

Hazardous reactions:
Reacts violently with water. Develops hydrochloric acid (HCL) on contact with water. The formation of gaseous decomposition products builds up pressure in tightly closed containers.

Hazardous decomposition products:
hydrogen chloride
The substances/substance groups mentioned are formed by hydrolysis.

Chemical stability:
The product is stable if stored and handled as prescribed/indicated.

Reactivity:
No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 3,450 - 3,470 mg/kg

Acute inhalation toxicity

(by inhalation):Study does not need to be conducted.

Acute dermal toxicity

(dermal):Study does not need to be conducted.

Assessment of acute toxicity

The toxicity of the product is based on its corrosivity.

Of low toxicity after single ingestion.

Symptoms

skin corrosion irritates the eyes and respiratory tract

Irritation

Assessment of irritating effects:
Corrosive! Damages skin and eyes.

Experimental/calculated data:
Skin corrosion/irritation:The European Union (EU) has classified this substance with 'Causes burns.'

Serious eye damage/irritation:Study does not need to be conducted.

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:

No mutagenic effect was found in various tests with microorganisms and mammals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity:
No reliable data was available concerning carcinogenic activity. The chemical structure does not suggest a specific alert for such an effect.

Experimental/calculated data:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Developmental toxicity

Assessment of teratogenicity:
The potential to cause toxicity to development cannot be excluded when given in high doses. The product has not been tested. The statement has been derived from the structure of the product.

Specific target organ toxicity (single exposure)

Based on the available information there is no specific target organ toxicity to be expected after a single exposure. The toxicity of the product is based on its corrosivity.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
The substance may cause damage to the upper respiratory tract after repeated inhalation, as shown in animal studies. After repeated administration the prominent effect is the induction of corrosion.

The information available on the product provides no indication of toxicity on target organs after repeated exposure. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Aspiration hazard

not applicable

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms.

The effect strongly depends on the pH-value. EU-classification

Toxicity to fish:
LC50 (96 h) 20.3 mg/l, Pimephales promelas (EPA 72-1, semistatic)

Aquatic invertebrates:
EC50 (48 h) 27.3 mg/l, Daphnia magna (Directive 84/449/EEC, C.2, static)
The details of the toxic effect relate to the nominal concentration.

Aquatic plants:
EC50 (72 h) 1.05 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) other TS

EC10 (72 h) 0.16 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) other TS

Microorganisms/Effect on activated sludge:
EC10 (180 min) > 1,000 mg/l, activated sludge, domestic, non-adapted (OECD Guideline 209, aerobic)
The details of the toxic effect relate to the nominal concentration.

Chronic toxicity to fish:
No observed effect concentration (7 d) 0.16 mg/l, Pimephales promelas (other, semistatic)

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (6 d), 0.34 mg/l, Ceriodaphnia dubia (other, semistatic)

Assessment of terrestrial toxicity:

Soil living organisms:
LC50 (14 d) > 1,000 mg/kg, Eisenia sp. (Range-finding-study, artificial soil)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Terrestrial plants:
No data available.

Other terrestrial non-mammals:
No data available.

Mobility

Assessment transport between environmental compartments:
No data available.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Not applicable for inorganic substances.

Elimination information:
not applicable

Assessment of stability in water:
In contact with water the substance will hydrolyse rapidly.

Information on Stability in Water (Hydrolysis):
not applicable

Bioaccumulation potential

Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

Bioaccumulation potential:
Bioconcentration factor: 400 - 1,365, Fish (other)

Bioconcentration factor: 40 - 1,326 (30 d), Salvelinus fontinalis (other)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Additional information

Other ecotoxicological advice:
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

13. Disposal Considerations

Must be disposed of by special means, e.g. suitable dumping after chemical/physical pretreatment (consolidation).
Check for possible recycling.
Contact waste centre regarding recycling.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Domestic transport:

UN number or ID number:	UN 1726
UN proper shipping name:	ALUMINIUM CHLORIDE, ANHYDROUS
Transport hazard class(es):	8
Packing group:	II
Environmental hazards:	no
Special precautions for user:	None known

Sea transport
IMDG

UN number or ID number:	UN 1726
UN proper shipping name:	ALUMINIUM CHLORIDE, ANHYDROUS
Transport hazard class(es):	8
Packing group:	II

Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-A; S-B

Air transport
IATA/ICAO

UN number or ID number:	UN 1726
UN proper shipping name:	ALUMINIUM CHLORIDE, ANHYDROUS
Transport hazard class(es):	8
Packing group:	II
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Other regulations

16. Other Information

This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.