

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date : 2022/10/20
Version: 7.1

Page: 1/12
(30041207/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Aluminium chloride anhydrous ground

Recommended use of the chemical and restriction on use

Recommended use*: Raw material
Recommended use*: Intermediate; catalyst; process chemical
Suitable for use in industrial sector: chemical industry
Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: No data available.

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20

Version: 7.1

Page: 2/12

(30041207/SDS_GEN_US/EN)

Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

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.

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): Remove or 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.

P363 Wash contaminated clothing before reuse.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

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.

Labeling of special preparations (GHS):

Reacts violently with water. Corrosive to the respiratory tract.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

aluminium chloride

CAS Number: 7446-70-0

Content (W/W): >= 75.0 - <= 100.0%

Synonym: Aluminium trichloride

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 3/12
(30041207/SDS_GEN_US/EN)

4. First-Aid Measures

Description of first aid measures

General advice:

Immediately remove contaminated clothing. Immediate medical attention required.

If inhaled:

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

Seek medical attention.

If on skin:

Flush with copious amounts of water for at least 15 minutes. Seek medical attention.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

If swallowed:

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

Most important symptoms and effects, both acute and delayed

Symptoms: skin corrosion, irritates the eyes and respiratory tract

Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder

Unsuitable extinguishing media for safety reasons:
water

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Hydrogen chloride,

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

Advice for fire-fighters

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 4/12
(30041207/SDS_GEN_US/EN)

Protective equipment for fire-fighting:
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, protective equipment and emergency procedures

Breathing protection required.

Environmental precautions

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

Methods and material for containment and cleaning 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

Precautions for safe 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.

Conditions for safe storage, including any incompatibilities

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/Personal Protection

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20

Version: 7.1

Page: 5/12

(30041207/SDS_GEN_US/EN)

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. Eye wash fountains and safety showers must be easily accessible. 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
Odour:	pungent odour
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	yellowish
pH value:	2.4 (100 g/l)
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
Flammability:	not highly flammable
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Vapour pressure:	< 1 mbar (20 °C)

(Regulation
440/2008/EC, A.10)

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 6/12
(30041207/SDS_GEN_US/EN)

Density:	2.44 g/cm ³ (25 °C) Literature data.	
Relative density:	2.48 Literature data.	(other)
Bulk density:	1,200 kg/m ³	
Vapour density:	The product is a non-volatile solid.	
Partitioning coefficient n-octanol/water (log Pow):	Study scientifically not justified.	
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting. not self-igniting	(Regulation 440/2008/EC, A.16)
Thermal decomposition:	No decomposition if correctly stored and handled.	
Viscosity, dynamic:	Study scientifically not justified.	
Viscosity, kinematic:	not applicable, the product is a solid	
Particle size:		(measured)
Solubility in water:	450 g/l (20 °C)	
Molar mass:	133.34 g/mol	
Evaporation rate:	not applicable, The product is a non-volatile solid.	

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:

Corrodes metals in the presence of water or moisture.

Oxidizing properties:

not fire-propagating (Regulation 440/2008/EC, A.17)

Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.
	Method:	Flammability (Contact with water)

Chemical stability

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

Possibility of 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.

Conditions to avoid

See SDS section 7 - Handling and storage. Avoid humidity.

Incompatible materials

water

Hazardous decomposition products

Decomposition products:

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 7/12
(30041207/SDS_GEN_US/EN)

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

Thermal decomposition:
No decomposition if correctly stored and handled.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: The toxicity of the product is based on its corrosivity. Of low toxicity after single ingestion.

Oral

Type of value: LD50
Species: rat (male/female)
Value: 3,450 - 3,470 mg/kg

Inhalation

Study does not need to be conducted.

Dermal

Study does not need to be conducted.

Assessment other acute effects

No applicable information available.

Irritation / corrosion

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

Skin

The European Union (EU) has classified this substance with 'Causes burns.' (R34).

Eye

Study does not need to be conducted.

Sensitization

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

Guinea pig maximization test

Species: guinea pig
Result: Non-sensitizing.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 8/12
(30041207/SDS_GEN_US/EN)

Repeated dose toxicity

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 substance may cause damage to the upper respiratory tract after repeated inhalation, as shown in animal studies. The results are preliminary and do not provide a complete understanding of the effect observed.

Genetic toxicity

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.

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.

Teratogenicity

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.

12. Ecological Information

Toxicity

Aquatic toxicity

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.

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

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)

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 9/12
(30041207/SDS_GEN_US/EN)

Assessment of terrestrial toxicity

No toxic effects have been observed in studies with soil living organisms.

Soil living organisms

Toxicity to soil dwelling 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.

Toxicity to terrestrial plants

No data available.

Other terrestrial non-mammals

No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aerobic

activated sludge, domestic, non-adapted/EC10 (180 min): > 1,000 mg/l

The details of the toxic effect relate to the nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Inorganic product which cannot be eliminated from water by biological purification processes.

Elimination from water by precipitation or flocculation.

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

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

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

Mobility in soil

Assessment transport between environmental compartments

No data available.

Additional information

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 10/12
(30041207/SDS_GEN_US/EN)

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

13. Disposal considerations

Waste disposal of substance:

Check for possible recycling. Contact waste centre regarding recycling.

Container disposal:

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

RCRA: D001
This product is regulated by RCRA.

D003
This product is regulated by RCRA.

14. Transport Information

Land transport

USDOT

Hazard class: 8
Packing group: II
ID number: UN 1726
Hazard label: 8
Proper shipping name: ALUMINIUM CHLORIDE, ANHYDROUS

Sea transport

IMDG

Hazard class: 8
Packing group: II
ID number: UN 1726
Hazard label: 8
Marine pollutant: NO
Proper shipping name: ALUMINIUM CHLORIDE, ANHYDROUS

Air transport

IATA/ICAO

Hazard class: 8
Packing group: II
ID number: UN 1726
Hazard label: 8
Proper shipping name: ALUMINIUM CHLORIDE, ANHYDROUS

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20
Version: 7.1

Page: 11/12
(30041207/SDS_GEN_US/EN)

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

<u>CERCLA RQ</u>	<u>CAS Number</u>	<u>Chemical name</u>
1000 LBS	7646-85-7; 7705-08-0	zinc chloride; Iron trichloride
100 LBS	7718-54-9	Nickel chloride (NiCl ₂)

State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
NJ	7446-70-0	aluminium chloride
PA	7446-70-0	aluminium chloride

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including NICKEL COMPOUNDS, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 3 Fire: 1 Reactivity: 1 Special: -W-

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox.	5 (oral)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation

16. Other Information

SDS Prepared by:

BASF NA Product Regulations
SDS Prepared on: 2022/10/20

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Safety Data Sheet

Aluminium chloride anhydrous ground

Revision date: 2022/10/20

Version: 7.1

Page: 12/12

(30041207/SDS_GEN_US/EN)

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