

# **SAFETY DATA SHEET** **Polyaluminium chloride**

Commission Regulation (EU) 2020/878 of 18 June 2020.

According to Regulation (EC) No 1907/2006, Annex II, as amended.

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

## **SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

### 1.1. Product identifier

<b>Product name</b>	<b>Polyaluminium chloride</b>
<b>CAS-No.</b>	1327-41-9
<b>EC No.</b>	215-477-2
<b>REACH No.</b>	01-2119531563-43-0064

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

<b>Identified uses</b>	Industrial use.
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## **SECTION 2: HAZARDS IDENTIFICATION**

### 2.1. Classification of the substance or mixture

#### **Classification (EC 1272/2008)**

Physical and Chemical Hazards	Met. Corr. 1 - H290
Human Health Hazards	Eye dam. 1 - H318
Environment Hazards	Not classified.

The Full Text for all Hazard Statements are Displayed in Section 16.

### 2.2. Label elements

**Label In Accordance With (EC) No. 1272/2008**

**CAS No:** 1327-41-9



**Signal Word** Danger

#### **Hazard Statements**

H290	May be corrosive to metals.
H318	Causes serious eye damage.

#### **Precautionary Statements**

P261	Avoid breathing dust.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P310 Immediately call a POISON CENTER/doctor.

## **2.3. Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

### **3.1. Substances**

<b>Product Name</b>	Polyaluminium chloride
<b>Chemical Formula</b>	Al(OH)Cl <sub>2</sub>
<b>Chemical Name</b>	Aluminum chloride, basic
<b>Content</b>	20-60 %
<b>CAS-No.</b>	1327-41-9
<b>EC No.</b>	215-477-2
<b>REACH No.</b>	01-2119531563-43-0064

#### **Composition Comments**

- The data shown are in accordance with the latest EC Directives.

## **SECTION 4: FIRST AID MEASURES**

### **4.1. Description of first aid measures**

#### **Inhalation**

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

#### **Ingestion**

Rinse mouth with water. Drink 1 or 2 glasses of water or milk. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

#### **Skin contact**

Remove affected person from source of contamination. Remove contaminated clothing.  
Wash the skin immediately with soap and water. Get medical attention if irritation persists after washing.

#### **Eye contact**

Important! Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If possible use lukewarm water. Consult a physician. Do not rub the eyes, mechanical irritation. Continue rinsing eyes during transport to hospital.

### **4.2. Most important symptoms and effects, both acute and delayed**

Corrosive effects, May cause irreversible eye damage.

### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Extinguishing media**

Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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### **5.2. Special hazards arising from the substance or mixture**

Hydrogen chloride may be released when heating above the decomposition temperature.

### **5.3. Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus.

Fire fighters must wear fire resistant personnel protective equipment.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Refer to protective measures listed in section "Handling and storage". Wear protective suit and boots. If aerosols or mist are formed, use half mask with combination filter B/P2.

### **6.2. Environmental precautions**

Cover the drains to prevent the product from entering the environment. If the product contaminates rivers and lakes or drains inform respective authorities. Restrict the spread of the spillage by using inert absorbent material (sand, gravel).

### **6.3. Methods and material for containment and cleaning up**

Remove larger spills using a vacuum truck. Dilute residues with water and neutralize with lime or limestone powder.

Must be disposed of in accordance with local and national regulations.

### **6.4. Reference to other sections**

For personal protection, see section 8.

See section 11 for additional information on health hazards.

For waste disposal, see section 13.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

- The work place and work methods shall be organized in such a way that direct contact with the product is prevented or minimized.
- Wear gloves in a suitable material such as PVC, Neoprene or Natural rubber.
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also consider the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time.
- Tightly fitting safety goggles must be worn.
- Eye wash bottles or emergency eye-wash fountains in the workplace are recommended.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Storage**

- Keep away from incompatible products.
- Avoid freezing.
- Avoid high temperatures.

#### **Packaging material**

- Plastic (PE, PP, PVC)
- Fiberglass-reinforced polyester
- Epoxy-coated concrete
- Titanium
- Acidproof or rubber-coated steel

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### 7.3. Specific end use(s)

For further information see attached Exposure Scenario.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

No occupational exposure limits.

#### Derivation of DNEL(s)

Target group	Exposure route	Effect time	Type of effect	Value
Workers	Inhalation	Long term	Systemic	16.4 mg/m <sup>3</sup>
Workers	Dermal	Long term	Systemic	4.6 mg/kg bw/day
General population	Inhalation	Long term	Systemic	4 mg/m <sup>3</sup>
General population	Dermal	Long term	Systemic	2.32 mg/kg bw/day
General population	Oral	Long term	Systemic	2.32 mg/kg bw/day

#### PNEC(ler)

Hedef	Değer
Fresh water	3.2 µg/L
marine water	0.32 µg/L
STP	300 mg/L
sediment (freshwater)	0.219 mg/kg
sediment (marine water)	21.9 µg/kg

### 8.2. Exposure controls

#### Protective equipment



#### Process conditions

Provide eyewash station.

#### Engineering measures

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

#### Respiratory equipment

In case of inadequate ventilation or risk of inhalation of dust, use half mask with dust filter P2.

#### Hand protection

For prolonged or repeated skin contact use suitable protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Glove material: PVC and neoprene gloves.

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### **Eye protection**

If risk of splashing, wear safety goggles or face shield (EN 166).

### **Hygiene measures**

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

### **Skin protection**

Wear apron or protective clothing in case of contact.

### **Environmental Exposure Controls**

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Clear liquid
<b>Colour</b>	Yellow
<b>Odour</b>	No data available
<b>Odour threshold</b>	No data available
<b>pH-Value</b>	No data available
<b>Melting/Freezing Point</b>	< -90°C
<b>Initial boiling point and range</b>	75 - 175°C
<b>Flash point</b>	No flash point was observed until boiling up to about 110°C.
<b>Evaporation rate</b>	No data available
<b>Upper/lower flammability or explosive limits</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Vapor pressure @ 20 ° C</b>	No data available
<b>Vapor density</b>	No data available
<b>Relative density</b>	1.36
<b>Solubility</b>	Miscible in water.
<b>Partition coefficient: n-octanol / water</b>	No data available
<b>Density</b>	1.36 g/cm <sup>3</sup> @20°C
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Oxidative properties</b>	Not oxidizing.
<b>Explosive properties</b>	Not explosive.
<b>Particle characteristic</b>	No data available

### **9.2. Other information**

No data available

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### **SECTION 10: STABILITY AND REACTIVITY**

#### **10.1. Reactivity**

No data available.

#### **10.2. Chemical stability**

Explosive or self-reactive properties are not expected (depending on chemical structure).

#### **10.3. Possibility of hazardous reactions**

No data available.

#### **10.4. Conditions to avoid**

Keep away incompatible materials. Avoid high temperatures. Avoid freezing.

#### **10.5. Incompatible materials**

Non acid-proof metals (such as aluminium, copper and iron). Bases. Unalloyed steel. Galvanized surfaces

#### **10.6. Hazardous decomposition products**

When heated above the decomposition temperature, hydrogen chloride may be released.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### **11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

##### **Acute toxicity**

Based on available data the classification criteria are not met.

LD50, oral	>2000 mg/kg (rat)
LD50, dermal	>2000 mg/kg (rat)
LD50, inhalation	>20 mg/l (vapour) (dust/mist)

##### **Skin corrosion/irritation**

Based on available data the classification criteria are not met.

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

Causes serious eye damage.

##### **Germ cell mutagenicity (In Vitro/ In Vivo)**

Based on available data the classification criteria are not met.

##### **Carcinogenicity**

Based on available data the classification criteria are not met.

##### **Reproductive Toxicity**

Based on available data the classification criteria are not met.

##### **Teratogenicity**

Based on available data the classification criteria are not met.

##### **STOT Specific target organ toxicity - single exposure**

Based on available data the classification criteria are not met.

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### **STOT Specific target organ toxicity - repeated exposure**

Based on available data the classification criteria are not met.

### **Aspiration hazard**

Based on available data the classification criteria are not met.

### **Human experience**

#### **Inhalation**

Symptoms: Cough and difficulties in breathing.

#### **Skin contact**

Symptoms: Effects of repeated or prolonged skin contacts may include: Dry skin, irritation.

#### **Eye contact**

Symptoms: Contact with eyes causes a smarting pain and a flood of tears. Risk of serious damage to eyes.

Remarks: The product may harm the cornea by mechanical action.

#### **Ingestion**

Symptoms: Ingestion may provoke the following symptoms: Nausea, Vomiting, irritation of mouth, oesophagus and stomach.

### **11.2. Information on other hazards**

This product does not contain any known or suspected endocrine disruptors.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1. Toxicity**

EC50 (48 h)	> 200 mg/l, <i>Daphnia magna</i> (OECD Guide 202, part 1, static)
EC50 (72 h)	14 mg/l, <i>Selenastrum capricornutum</i> (OECD Guide 201, static)
EC10 (72 h)	3.1 mg/l, <i>Pseudokirchneriella subcapitata</i> (OECD Guide 201, static)

### **12.2. Persistence and degradability**

#### **Biological degradability:**

No data available.

### **12.3. Bioaccumulative potential**

The product is not expected to bioaccumulate.

### **12.4. Mobility in soil**

#### **Mobility**

There is no data on the mobility of the product in soil.

### **12.5. Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **12.6. Endocrine disrupting properties**

This product does not contain any known or suspected endocrine disruptors.

### **12.7. Other adverse effects**

May lower the pH of water and thus be harmful to aquatic organisms.

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### **SECTION 13: DISPOSAL CONSIDERATIONS**

#### **General information**

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

#### **13.1. Waste treatment methods**

Dispose of waste and residues in accordance with local authority requirements. Dispose of on site landfill area.

### **SECTION 14: TRANSPORT INFORMATION**

**General** Limited quantities derogation may be applicable to this product, please check transport documents.

#### **14.1. UN number or ID number**

<b>UN No. (ADR/RID/ADN)</b>	3264
<b>UN No. (IMDG)</b>	3264
<b>UN No. (ICAO)</b>	3264

#### **14.2. UN proper shipping name**

**Proper Shipping Name** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Polyaluminium chloride)

#### **14.3. Transport hazard class(es)**

<b>ADR/RID/ADN class</b>	8
<b>ADR/RID/ADN class</b>	Class 8: Corrosive substances.
<b>ADR Label No.</b>	8
<b>IMDG class</b>	8
<b>ICAO class/division</b>	8
<b>Transport labels</b>	



#### **14.4. Packing group**

<b>ADR/RID/ADN packing group</b>	III
<b>IMDG packing group</b>	III
<b>ICAO packing group</b>	III

#### **14.5. Environmental hazards**

**Environmentally Hazardous Substance/Marine Pollutant**  
No.

#### **14.6. Special precautions for user**

<b>EMS</b>	F-A, S-B
<b>ADR transport category</b>	3
<b>Emergency Action Code</b>	2X
<b>Hazard Identification No (ADR/RID)</b>	80
<b>Tunnel restriction code</b>	(E)

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### **14.7. Maritime transport in bulk according to IMO instrument**

No information required.

## **SECTION 15: REGULATORY INFORMATION**

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

#### **EU Legislation**

- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures.
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
- Commission Regulation (EU) 2020/878 of 18 June 2020.

#### **Restrictions (Annex XVII Regulation 1907/2006)**

There are no known restrictions on the use of this product.

#### **Seveso Directive - Control of major accident hazards**

Not relevant.

### **15.2. Chemical Safety Assessment**

Chemical safety assessment has been carried out.

## **SECTION 16: OTHER INFORMATION**

### **Abbreviations used in safety data sheet**

ADR: European Agreement on International Carriage of Dangerous Goods by Road.

ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.

RID: European Agreement on International Carriage of Dangerous Goods by Rail.

IATA: International Air Transport Association.

ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

TWA: Time weighted average

ATE: Estimated value of acute toxicity

EC No: European Community number

CAS: Chemical Theory Service.

LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).

LC50: Substance concentration causing 50% (half) death in the test animals group.

EC50: Effective Concentration of the substance causing the maximum of 50%.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Permanent, Very Biofriendly.

SEA: Classification, labeling, packaging regulation

DNEL: Derivative Inactive Level

PNEC: Estimated Unaffected Concentration

### **Information Sources**

This SDS is written based on the information received from rawmaterial supplier.

European Chemicals Agency (ECHA)

### **Revision Comments**

This is first issue.

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### **Hazard Statements In Full**

H290 May be corrosive to metals.

H318 Causes serious eye damage.

### **Issued By**

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### **Issued Note**

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