



SAFETY DATA SHEET

Coagulant 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

Product name	Coagulant Polyaluminium Chloride - F0335-A02525-A02526
CAS-No.	1327-41-9
EC No.	215-477-2
REACH No.	01-2119531563-43-0064

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

Identified uses	Industrial use.
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1.3. Details of the supplier of the safety data sheet

Supplier	Indufarm nv Leon Bekaertstraat 5 8770 Ingelmunster (Belgium) Tel. : +32 (0)51 62 42 45
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1.4. Emergency telephone number

Anti poison center	: +32 (0)70 245 245
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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
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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

Product Name Chemical	Polyaluminium chloride
Formula Chemical	Al(OH)Cl ₂
Name Content	Aluminum chloride, basic
CAS-No.	20-60 %
EC No.	1327-41-9
REACH No.	215-477-2 01-2119531563-43-0064
Dosage Information	Polyaluminum Chloride 250 mg/L

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 ³
Workers	Dermal	Long term	Systemic	4.6 mg/kg bw/day
General population	Inhalation	Long term	Systemic	4 mg/m ³
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

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

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

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



14.4. Packing group

ADR/RID/ADN packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

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

The certificate information is used exclusively for this SDS. No changes can be made to this SDS without the knowledge and approval of the certificate holder or the certificate information can not be used for another SDS. Otherwise, the certificate will assume no responsibility for the owner SDS.

This SDS is prepared based on the information and documents received from product owner. CRAD or/and SDS author shall not be responsible for incorrect prepared of SDS and pecuniary loss or intangible damages because of deficient or wrong information and documents which comes from product owner.

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