

SAFETY DATA SHEET

Flocculation chemical PROF polyaluminium chloride

SDS according to Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II-EU

SECTION 1: Identification of the substance / mixture and of the company / undertaking

Date issued 25.11.2021

Revision date 25.11.2021

1.1. Product identifier

Product name Flocculation chemical PROF polyaluminium chloride

UFI GDS2-4GUW-6157-3GGC

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

Use of the substance / preparation Water treatment chemical
Flocculant.

Uses advised against Do not use for non-identified uses.

1.3. Details of the supplier of the safety data sheet**Supplier**

Company name Onninen Oy

Office address Työpajankatu 12

Postcode 00580

City Helsinki

Country Finland

Email asiakaspalvelu@onninen.com

Website www.onninen.fi

Enterprise No. 1071207-9

1.4. Emergency telephone number

Emergency telephone Description: Poison Information Centre, Tukholmankatu 17, P.O.Box 790, FI-00029 HUS Helsinki), Finland tel. (24 h) / 09-4711 (exchange), 09-471977 (direct)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Eye Dam. 1; H318 Met. Corr. 1; H290
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2.2. Label elements

Hazard pictograms (CLP)



Signal word	Danger
Hazard statements	H318 Causes serious eye damage. H290 May be corrosive to metals.
Precautionary statements	P102 Keep out of reach of children. P234 Keep only in original packaging. P280 Wear protective gloves/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. P310 Immediately call a POISON CENTER or doctor / physician. P101 If medical advice is needed, have product container or label at hand. P390 Absorb spillage to prevent material damage.
Supplemental label information	P501 Dispose of contents / container according to national and local regulations.

2.3. Other hazards

PBT / vPvB	This product does not contain any PBT or vPvB substances.
Other hazards	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. When heated, toxic and corrosive vapours/gases may be formed.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Polyaluminium chloride	CAS No.: 1327-41-9 EC No.: 215-477-2 REACH Reg. No.: 01-2119531563-43	Met. Corr. 1; H290 Eye Dam. 1; H318	24 - 35 %	

SECTION 4: First aid measures

4.1. Description of first aid measures

General	IF exposed or concerned: Get medical advice/attention. If medical advice is needed, have product container or label at hand.
Inhalation	Move into fresh air and keep at rest. IF exposed: Call a POISON CENTER or doctor/physician.
Skin contact	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. IF exposed: Call a POISON CENTER or doctor/physician.

Eye contact	Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	Immediately rinse mouth and drink plenty of water (200 - 300 ml). Do not induce vomiting. Get medical advice/attention.

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

General symptoms and effects	Corrosive. May cause blurred vision and serious eye damage.
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4.3. Indication of any immediate medical attention and special treatment needed

Medical treatment	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials. The product is non-combustible.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	The product is non-combustible. If heated, toxic vapours may be formed.
Hazardous combustion products	Hydrogen chloride (HCl).

5.3. Advice for firefighters

Personal protective equipment	Self contained breathing apparatus and full protective clothing must be worn in case of fire.
Other information	Avoid breathing dust / fume / gas / mist / vapours / spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Provide adequate ventilation.
Protective equipment	Use personal protective equipment as required.

6.2. Environmental precautions

Environmental precautionary measures	Runoff or release to sewer, waterway or ground is forbidden. Prevent spillage entering a watercourse or sewer, contaminating soil or vegetation. If this is not possible notify police and appropriate authorities immediately.
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6.3. Methods and material for containment and cleaning up

Clean up	Ventilate well. Dilute with copious amounts of water. Large Spillages: Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Neutralise spilled material with crushed limestone, soda ash or lime. Shovel into dry containers. Cover and move the containers. Flush the area with water.
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6.4. Reference to other sections

Other instructions	For personal protection, see section 8. For waste disposal, see section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Provide sufficient air exchange and/or exhaust in work rooms.
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Protective safety measures

Protective safety measures	Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in tightly closed original container in a dry, cool and well-ventilated place.
Conditions to avoid	Avoid frost.

Conditions for safe storage

Packaging compatibilities	Plastic. (PE, PP, PVC). Plastic lined steel drum. Titanium glass fiber strenghtened poly ester
Storage temperature	Value: > 0 < 30 °C

7.3. Specific end use(s)

Specific use(s)	Water treatment material.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Polyaluminium chloride	CAS No.: 1327-41-9	Country of origin: Great Britain Limit value type: TWA Limit value (8 h) : 2 mg/m ³ Comments: EH40/2005 (Fourth Edition 2020)	

DNEL / PNEC

DNEL	Group: Professional Route of exposure: Long-term inhalation (systemic) Value: 16,4 mg/m ³
	Group: Professional Route of exposure: Long-term dermal (systemic) Value: 4,6 mg/kg
	Group: Consumer

PNEC	Route of exposure: Long-term inhalation (systemic) Value: 4 mg/m ³
	Group: Consumer Route of exposure: Long-term dermal (systemic) Value: 2,32 mg/kg bw/day
	Group: Consumer Route of exposure: Long-term oral (systemic) Value: 2,3 mg/kg
	Comments: Not relevant.

8.2. Exposure controls

Precautionary measures to prevent exposure

Appropriate engineering controls	Provide adequate ventilation. Avoid contact with skin and eyes. Use personal protective equipment as required.
Product related measures to prevent exposure	Provide eyewash, quick drench.

Eye / face protection

Suitable eye protection	Wear approved chemical safety goggles where eye exposure is reasonably probable.
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Hand protection

Skin- / hand protection, short term contact	Protective gloves must be used if there is a risk of direct contact or splash.
Suitable gloves type	Rubber gloves are recommended.
Suitable materials	Polyvinyl chloride (PVC). Neoprene.
Hand protection, comments	The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Skin protection

Suitable protective clothing	Wear appropriate clothing to prevent reasonably probable skin contact. Apron or other light protective clothing and boots.
Additional skin protection measures	Wear rubber footwear.

Respiratory protection

Respiratory protection, general	Under normal conditions of use respiration protection should not be required. In case of inadequate ventilation wear respiratory protection.
Respiratory protection necessary at	Avoid forming spray/aerosol mists.
Recommended type of equipment	Use respiratory equipment with particle filter, type P2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid
Physical state	Liquid.
Colour	Yellowish.
Odour	Not relevant.
pH	Value: ~ 1.5
Melting point / melting range	Value: - 30 °C
Boiling point / boiling range	Value: 100 - 120 °C
Flammability	This product is not flammable.
Density	Value: 1,28 - 1,34 g/cm ³
Solubility	Comments: Completely soluble in water. Temperature: 20 °C
Partition coefficient: n-octanol/ water	Comments: Not applicable.
Decomposition temperature	Value: > 200 °C
Viscosity	Value: 10 - 30 mPa.s Temperature: 23 °C
Explosive properties	Not classified.
Oxidising properties	None.

9.2. Other information

Other physical and chemical properties

Physical and chemical properties	May be corrosive to metals.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	May be corrosive to metals.
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10.2. Chemical stability

Stability	Stable under normal temperature conditions. Thermal decomposition can take place above 200 °C.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Exothermic reaction with: Strong alkalis.
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10.4. Conditions to avoid

Conditions to avoid	Do not store near heat sources or exposed to high temperatures. Store above
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freezing.

10.5. Incompatible materials

Materials to avoid

Metals.
Strong alkalis.
Reducing Agents.
sulphites
Sulphides
Organic materials

10.6. Hazardous decomposition products

Hazardous decomposition products

When heated, vapours/gases hazardous to health may be formed.
Hydrogen chloride (HCl).
Sulphurous gases (SO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Effect tested: LD50
Route of exposure: Oral
Value: > 2000 mg/kg
Species: Rat

Effect tested: LC50
Route of exposure: Inhalation.
Value: > 5,0 mg/l
Species: Rat

Effect tested: LD50
Route of exposure: Dermal
Value: > 2000 mg/kg
Species: Rat

Other information regarding health hazards

Skin corrosion / irritation test result

Method: OECD 404
Species: Rabbit
Evaluation result: Not Irritating.
Comments: (45 % solution)

Skin corrosion / irritation, other information

Prolonged and frequent contact may cause redness and irritation.

Eye damage or irritation, test results

Method: OECD 405
Species: Rabbit
Evaluation result: Severe irritation.
Comments: (45 % liuos)

Eye damage or irritation other information

Causes serious eye damage.

Sensitisation

Not Sensitising.

Mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity, other information	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - single exposure, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - repeated exposure, classification	Based on available data, the classification criteria are not met.
Aspiration hazard, comments	Based on available data, the classification criteria are not met.

Symptoms of exposure

In case of ingestion	Irritating. May cause nausea, stomach pain and vomiting.
In case of skin contact	May irritate and cause redness and pain.
In case of inhalation	May cause irritation to the respiratory system.
In case of eye contact	Irritating and may cause redness and pain. Causes serious eye damage.

11.2 Other information

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity, fish	Value: > 1000 mg/l Effect dose concentration: NOEC Exposure time: 96 hour(s) Species: Danio rerio (zebra fish) Method: OECD 203
Aquatic toxicity, algae	Value: 14 mg/l Effect dose concentration: EC50 Exposure time: 72 hour(s) Species: Pseudokirchneriella subcapitata (green algae) Value: 0,24 mg/l Effect dose concentration: EC50 Exposure time: 72 hour(s) Species: Pseudokirchneriella subcapitata (green algae) Method: OECD 201 Comments: (A)
Aquatic toxicity, crustacean	Value: 98 mg/l Effect dose concentration: EC50 Species: Daphnia magna Method: OECD 202

12.2. Persistence and degradability

Persistence and degradability description/evaluation	Not Applicable - Inorganic chemical.
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12.3. Bioaccumulative potential

Bioaccumulation, comments	Bioaccumulation: Is not expected to be bioaccumulable. Not Applicable - Inorganic chemical.
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12.4. Mobility in soil

Mobility	The product is soluble in water.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	None known.
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12.7. Other adverse effects

Additional ecological information	No data recorded.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Waste is classified as hazardous waste. Dispose of waste and residues in accordance with local authority requirements. Jäännökset laimennetaan vedellä ja neutraloidaan sitten kalkilla tai kalkkikivijauheella. Do not allow runoff to sewer, waterway or ground.
Appropriate methods of disposal for the contaminated packaging	Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: Transport information

Dangerous goods	Yes
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14.1. UN number

ADR/RID/ADN	3264
IMDG	3264
ICAO/IATA	3264

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name/Danger releasing substance English ADR/RID/ADN	(Polyaluminium chloride)
ADR/RID/ADN	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name/danger releasing substance ADR/RID/ADN	(Polyaluminium chloride)
IMDG	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

Technical name/danger releasing substance IMDG	(Polyaluminium chloride)
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ICAO/IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
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Technical name/danger releasing substance ICAO/IATA	(Polyaluminium chloride)
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14.3. Transport hazard class(es)

ADR/RID/ADN	8
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Classification code ADR/RID/ADN	C1
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IMDG	8
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ICAO/IATA	8
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14.4. Packing group

ADR/RID/ADN	III
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IMDG	III
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ICAO/IATA	III
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14.5. Environmental hazards

14.6. Special precautions for user

14.7. Maritime transport in bulk according to IMO instruments

Product name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
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Additional information

Hazard label ADR/RID/ADN	8
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Hazard label IMDG	8
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Hazard label ICAO/IATA	8
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ADR/RID Other information

Tunnel restriction code	E
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Transport category	3
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Hazard No.	80
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Other applicable information ADR/RID	80
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IMDG Other information

EmS	F-A, S-B
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SECTION 15: Regulatory information

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

Assessed restrictions	Not known.
Legislation and regulations	<p>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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.</p> <p>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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.</p>

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes
CSR required	Yes

SECTION 16: Other information

Supplier's notes	The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.
List of relevant H-phrases (Section 2 and 3)	H290 May be corrosive to metals. H318 Causes serious eye damage.
CLP classification, notes	The information provided is based on data on ingredients.
Key literature references and sources for data	Manufacturers material safety data sheet 12.04.2021
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	1