PAC Sulphated

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 10/27/2023 Revision date: 10/27/2026 Version: 1.1

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	PAC Sulphated
EC-No.	:	234-933-1
CAS-No.	:	120242-91-0
Product code	:	PAC Sulphated
Type of product	:	Mixture
Formula	:	AlCl3
Product group	:	Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture	:	Chemical intermediate Water treatment Waste water treatment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ImproChem(Pty) Ltd T/A AECI Water
1 Wharhirst Road
Umbogintwini - South Africa
T +27(31) 949 8200

1.4. Emergency telephone number

Emergency number	:	0800 SPILLS or 0800 774557

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Corrosive to metals, Category 1	H290
Serious eye damage/eye irritation, Category 1	H318

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05

Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H290 - May be corrosive to metals. H318 - Causes serious eye damage.
Precautionary statements (CLP)	:	P280 - Wear goggles, gloves, clothing and respiratory protection eye protection, face protection P310 - Immediately call a POISON CENTER or doctor/physician. P390 - Absorb spillage to prevent material damage.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminium Chlorohydrate	(CAS-No.) 12042-91-0	20 – 35	Met. Corr. 1, H290 Eye Dam. 1, H318

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Rinse with water. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

First-aid measures after ingestion : Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : Inflammation/damage of the eye tissue.

Symptoms/effects after ingestion : No effects known.

Chronic symptoms : No effects known.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Polyvalent foam. ABC powder. Carbon dioxide.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Non-flammable.

Explosion hazard : DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Dilute toxic gases with water spray.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. Protective clothing.

Emergency procedures : Mark the danger area. No naked flames. Keep containers closed. Wash contaminated clothes.

6.1.2. For emergency responders

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply.
Methods for cleaning up	:	Take up liquid spill into absorbent material, e.g.: dry lime or soda (sodium carbonate). Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Comply with the legal requirements. Remove contaminated clothing immediately. Thoroughly clean/dry the installation before use. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources	:	KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: metals.
Storage area	:	Store in a dry area. Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: plastics. MATERIAL TO AVOID: steel. aluminium.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment	:	Protective goggles. Gloves, shoulder length. Protective clothing. Safety Boots. Insufficient ventilation: wear respiratory protection.
Hand protection	:	Gloves, shoulder length
Eye protection	:	Protective goggles
Skin and body protection	:	Protective clothing
Respiratory protection	:	High gas/vapour concentration: gas mask with filter type B

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Molecular mass	:	133.34 g/mol
Colour	:	Light yellow.
Odour	:	Irritating/pungent odour. Mild odour.
Odour threshold	:	No data available
pH	:	< 2
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	< 0 °C
Boiling point	:	114 °C (1 hPa)
Flash point	:	No data available
Auto-ignition temperature	:	No data available

Decomposition temperature	:	No data available
Flammability	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	1.36 (20 °C)
Density	:	1360 kg/m³ (20 °C)
Solubility	:	Miscible with water. Soluble in water. Water: > 1000 g/l (20 °C)
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

Other properties : Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride). No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

PAC Sulphated (120242-91-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat; OECD 423: Acute Oral Toxicity – Acute Toxic Class Method; Experimental value)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)

Skin corrosion/irritation : Not classified
pH: < 2

Serious eye damage/irritation : Causes serious eye damage.
pH: < 2

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

PAC Sulphated (120242-91-0)	
Viscosity, kinematic	No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Maximum concentration in drinking water: 0.200 mg/l (aluminium) (Directive 98/83/EC); 250 mg/l (chloride) (Directive 98/83/EC). Toxic to fishes. Harmful to invertebrates. pH shift. Inhibition of activated sludge.

PAC Sulphated (120242-91-0)	
LC50 - Fish [1]	1.39 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Danio rerio; Static system; Fresh water; Experimental value)
EC50 - Crustacea [1]	98 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)
EC50 - Crustacea [2]	42 mg/l (EC10; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)

12.2. Persistence and degradability

PAC Sulphated (120242-91-0)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components available.

12.3. Bioaccumulative potential

PAC Sulphated (120242-91-0)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

PAC Sulphated (120242-91-0)	
Surface tension	0.0736 N/m (20 °C; 1 g/l)

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Precipitate/make insoluble. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment.

Additional information : LWCA (the Netherlands): KGA category 01. Hazardous waste according to Directive 2008/98/EC.

European List of Waste (LoW, EC 2150/2002) : 16 03 03* - inorganic wastes containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2581

UN-No. (IMDG) : 2581

UN-No. (IATA) : 2581

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Aluminium chloride solution

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Transport document description (ADR) : UN 2581 Aluminium chloride solution, 8, III, (E)

Transport document description (IMDG) : UN 2581 , 8

Transport document description (IATA) : UN 2581 , 8, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8

Danger labels (ADR) : 8

:

IMDG

Transport hazard class(es) (IMDG) : 8

IATA

Transport hazard class(es) (IATA) : 8

Danger labels (IATA) : 8

:

14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : Not applicable

Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Transport regulations (ADR) : Subject to the provisions

Classification code (ADR) : C1

Hazard identification number (Kemler No.) : 80

Orange plates :

Tunnel restriction code (ADR) : E

- Transport by sea

Transport regulations (IMDG) : Subject to the provisions

- Air transport

Transport regulations (IATA) : Subject to the provisions

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H290	May be corrosive to metals.
H318	Causes serious eye damage.
Met. Corr. 1	Corrosive to metals, Category 1

SDS ImproChem Test

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