



SAFETY DATA SHEET
POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)
Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name	POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)
Chemical name	$Al(OH)_aCl_b / Al(OH)_aCl_b(SO_4)_c$ ($a+b+2c=3$, $a>1$)
Product number	DD.44.280
CAS number	39290-78-3
EC number	254-400-7

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

Identified uses	Potable water treatment ,Industrial water treatment , Paper Industry
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	KORUMA KLOR ALKALİ SAN. VE TİC. A.Ş. Deniz Mah. Petrol Ofisi Cad. No:43 Derince / KOCAELİ - TURKEY Phone: +90(262) 239 22 70 E-mail : koruma@koruma.com.tr web: koruma.com
----------	---

Contact person	koruma@koruma.com.tr
----------------	----------------------

1.4. Emergency telephone number

Emergency telephone	Koruma Phone: +90 262 239 22 70
---------------------	---------------------------------

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Met. Corr. 1 - H290
Health hazards	Eye Dam. 1 - H318
Environmental hazards	Not Classified

2.2. Label elements

EC number	254-400-7
-----------	-----------

Hazard pictograms



Signal word	Danger
-------------	--------

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

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

Precautionary statements	<p>P501 Dispose of contents/ container in accordance with national regulations.</p> <p>P234 Keep only in original packaging.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P390 Absorb spillage to prevent material damage.</p> <p>P406 Store in a corrosion-resistant container with a resistant inner liner.</p>
---------------------------------	--

Contains POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE	50%
CAS number: 39290-78-3	EC number: 254-400-7
Classification	
Met. Corr. 1 - H290	
Eye Dam. 1 - H318	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
Skin contact	Rinse with water.
Eye contact	Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	No specific symptoms known.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Store in a demarcated bunded area to prevent release to drains and/or watercourses. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Chemical storage.

Shelf life 2 years

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection No specific hand protection recommended.

Other skin and body protection Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour	Colourless to pale yellow.
Odour	Characteristic.
pH	3.5- 4.5 (at 20°C, %5 solution)
Melting point	(-10)-(-15)°C
Initial boiling point and range	Not applicable.
Flash point	Not applicable.
Other flammability	Not applicable.
Bulk density	1.20±0.05 gr/cm ³ (@20 C)
Solubility(ies)	Miscible with water.
Explosive properties	Not applicable.

9.2. Other information

Other information	Alumina (Al ₂ O ₃) = min %10 ; Basicity = min.80
-------------------	--

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	See the other subsections of this section for further details.
------------	--

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
-----------	---

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.
------------------------------------	---

10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
---------------------	---

10.5. Incompatible materials

Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
--------------------	--

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.
----------------------------------	--

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD ₅₀)	Based on available data the classification criteria are not met.
--------------------------------	--

Acute toxicity - dermal

Notes (dermal LD ₅₀)	Based on available data the classification criteria are not met.
----------------------------------	--

Acute toxicity - inhalation

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Eye Dam. 1 - H318 Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	No specific symptoms known.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

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

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 3264

UN No. (IMDG) 3264

UN No. (ICAO) 3264

UN No. (ADN) 3264

14.2. UN proper shipping name

Proper shipping name (ADR/RID) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Aluminium chloride, basic/Polyaluminium chloride)

Proper shipping name (IMDG) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Aluminium chloride, basic/Polyaluminium chloride)

Proper shipping name (ICAO) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Aluminium chloride, basic/Polyaluminium chloride)

Proper shipping name (ADN) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Aluminium chloride, basic/Polyaluminium chloride)

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C1
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
----------------------	---

POLYALUMINIUM CHLORIDE HYDROXIDE SULPHATE (PACS 10)

EU legislation

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) No 2015/830 of 28 May 2015.
 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 (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 IATA: International Air Transport Association.
 ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
 IMDG: International Maritime Dangerous Goods.
 CAS: Chemical Abstracts Service.
 ATE: Acute Toxicity Estimate.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 EC₅₀: 50% of maximal Effective Concentration.
 PBT: Persistent, Bioaccumulative and Toxic substance.
 vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms

Eye Dam. = Serious eye damage

Classification procedures according to Regulation (EC) 1272/2008

Eye Dam. 1 - H318: : Calculation method.

Training advice

Only trained personnel should use this material.

Issued by

İrem ELİTEZ- irem.elitez@koruma.com.tr

Revision date

21/10/2019

Revision

0.0

Supersedes date

21/10/2019

SDS number

DD.44.280

Hazard statements in full

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

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.