	GUJARAT ALKALIES AND CHEMICALS LIMITED **MATERIAL SAFETY DATA SHEET** **Poly Aluminum Chloride**

1. CHEMICAL PRODUCT AND COMPNY IDENTIFICATION

PRODUCT IDENTIFICATION

Brand Name……	Poly Aluminum Chloride
Chemical Name……..	Poly Aluminum Chloride 10%, 18%, 30%
Common Name……..	Poly Aluminum Chloride
Formula……..	AlCl3 - [Al2(OH)nCl6-n·XH2O]m(m≤10, n=1~5)
Molecular Weight……..	241.43

MANUFACTURE	EMERGENCY TELEPHONE NUMBER
Guajrat Alkalies and Chemicals Ltd.	(02641) 256133
P.O.: Dahej, Ta: Vagra. GUJARAT	(02641) 256315-18 / 256325/35

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WEGHT %
Poly Aluminium Chloride	1327-41-9	30 %, 10%, 18%

Toxicological Data on Ingredients:

3. HAZARDOUS IDENTIFICATION

CAS No.……	1327-41-9
UN No...……	2581

Person-related safety precautions:
Product is an irritant to eyes and a sensitizer to skin. Use all necessary means to clean up spill safely. Provide adequate ventilation to spill area. Approve breathing apparatus may be necessary.
· Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.
· Measures for cleaning/collecting:
Stop leaks. Clean up spill immediately. Build dikes as necessary to contain flow of large spills. Do not allow liquid to enter stream or waterways. For small spills, use soda ash to neutralize, and inert material to absorb, or wash product to a chemical sewer.
· Additional information: No dangerous substances are released.

EMERGENCY OVERVIEW

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive), of eye contact (corrosive). Slightly hazardous in case of inhalation.
Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.

4. FIRST AID MEASURES

· General information: No special measures required.
· After inhalation: Remove person to non-contaminated air. Get immediate medical attention.
· After skin contact:
Wash skin thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention if irritation should develop.
· After eye contact:
Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. See Medical Attention.
· After swallowing:
Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical help immediately.
If possible give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear.
· Information for doctor:
Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents.
Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. FIRE FIGHTING MEASURES

· Suitable extinguishing agents: Product does not burn. Use water to keep containers cool.
· Protective equipment:
Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

6. ACCIDENTAL RELEASE MEASURES

Wear appropriate protective equipment.

· Person-related safety precautions:
Product is an irritant to eyes and a sensitizer to skin. Use all necessary means to clean up spill safely. Provide adequate ventilation to spill area. Approve breathing apparatus may be necessary.
· Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.
· Measures for cleaning/collecting:
Stop leaks. Clean up spill immediately. Build dikes as necessary to contain flow of large spills. Do not allow liquid to enter stream or waterways. For small spills, use soda ash to neutralize, and inert material to absorb, or wash product to a chemical sewer.
· Additional information: No dangerous substances are released.

7. HANDLING AND STORAGE

· Handling:
· Information for safe handling:
Avoid contact with eyes, skin and clothing. Avoid breathing mists and sprays. Use adequate ventilation and employ respiratory protection where mist or spray may be generated. Wash thoroughly after handling. Do not

take internally, May be harmful if swallowed or inhaled. Keep away from heat and open flame.
· Information about fire - and explosion protection: No special measures required.
· Storage:
· Requirements to be met by storerooms and receptacles:
Store in a cool dry place away from direct heat. Keep container tightly closed when not in use.
· Information about storage in one common storage facility: Store away from incompatible materials.
· Further information about storage conditions: DO not store in unlined metal containers.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

· Additional information about design of technical facilities:
Provide adequate local exhaust ventilation to minimize worker exposure.
· Ingredients with limit values that require monitoring at the workplace: Not required.
· Additional information: The lists valid during the making were used as basis.
· Personal protective equipment:
· General protective and hygienic measures:
Avoid prolonged inhalation of heated vapors. Wear standard work clothing and work shoes. A safety shower and
eye wash should be located in the immediate area.
· Respiratory protection:
When exposures exceed the PEL, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory
Protection Requirements under 29 CFR 1910.134.
· Protection of hands:
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· Eye protection: Safety glasses with side shield.
· Body protection:
Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

9. PHYSICAL AND CHEMICAL PROPERTIES

· General Information
· Appearance: Form: Clear Liquid / Powder
Colour: Colorless to light yellow
· Odour: No appreciable odor.
· Change in condition
Melting point/Melting range: -20°C
Boiling point/Boiling range: 120°C
· Flash point: Not applicable.
· Danger of explosion: Product does not present an explosion hazard.
· Vapour pressure at 20°C: 18 mmHg
· Density: Not determined.
· Solubility in / Miscibility with
water: Soluble.
· pH-value at 20°C: 2.5-3.5
· Additional information: Miscibility – miscible in water.

10. STABILITY AND REACTIVITY

· Thermal decomposition / conditions to be avoided:
Corrosive Liquid! Avoid storage in unlined metal containers. Product may slowly corrode iron, brass, copper, aluminum and mild Steel.
· Materials to be avoided: Alkalis
· Dangerous reactions No dangerous reactions known.
· Dangerous decomposition products:
Thermal decomposition may release toxic and/or hazardous gases such as chlorine and hydrochloric acid.

11. TOXICOLOGICAL INFORMATION

· Acute toxicity:
· LD/LC50 values relevant for classification:
Oral LD50 >12.79 mg/kg (rat)
· Primary irritant effect:
· on the skin: May cause mild skin irritation.
· on the eye: Irritating effect.
· Sensitization: No sensitizing effects known.
· Additional toxicological information:
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.
· Acute effects (acute toxicity, irritation and corrosivity)
SKIN: Dermatitis.
EYE: Irritation and burns.
INHALATION: Nose and respiratory irritation.
INGESTION: Toxic, nausea, vomiting, diarrhoea, burns to mucous membrane, liver and kidney damage.
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

12. ECOLOGICAL INFORMATION

Results of PBT and vPvB assessment TO BE PROVIDED IN THE REGISTRATION DOSSIER

13. DISPOSAL CONSIDERATIONS

· Product:
· Recommendation
Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous waste.
· Uncleaned packaging:
· Recommendation:
Contain and collect using absorbent material if needed. Place collected material into properly labeled, suitable containers for proper disposal.
Dispose in accordance with applicable MOEF, CPCB & GPCB regulations.

14. TRANSPORT INFORMATION

· Land transport ADR/RID (cross-border)
· ADR/RID class: -
· Maritime transport IMDG:
· IMDG Class: -
· Marine pollutant: No
· Air transport ICAO-TI and IATA-DGR:
· ICAO/IATA Class: -
· UN "Model Regulation": -
Special Provisions for Transport: Not available.

Further Information:
Vehicle driver is aware of the potential hazards of the load and knows to do in the event of an accident or an emergency.

15. REGULATORY INFORMATION

Health Hazard: 3
Fire Hazard: 0
Reactivity: 0
Personal Protection:
Protective Equipment:
Hand Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Use Face shield.

This product has been classified according to the hazard criteria of the MOEF, CPCB, GPCB & DISH Regulations, and the MSDS contains all required information.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
· Abbreviations and acronyms:
ADR: Accord européen sur le transport des merchandises dangerousness par Route (European Agreement concerning the International
Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des merchandises dangerousness par chemin de fer (Regulations Concerning the
International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association"
(IATA) ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"
(ICAO) EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
Sources
•REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 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
•Data from IUCLID dataset by European Commission.
http://ecb.jrc.ec.europa.eu/IUCLID-DataSheets/1327419.pdf

•MSDS of Ashland Inc.
http://www.stockhausen-inc.com/Products/Industrial/Msds%5CPRAESTOL%20K2001%20_10-5-06_.pdf
•Data from Chemcas.org
http://www.chemcas.com/msds/cas/msds8/1327-41-9.asp
•Data from LookChem
http://www.lookchem.com/msds/ALUMINUM-CHLOROHYDRATE%281327-41-9%29.pdf
· * Data compared to the previous version altered.
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