

POLY DADMAC

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

POLY DADMAC
Poly(diallyldimethylammonium chloride), aqueous solution
CAS: 26062-79-3

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Cationic coagulant for municipal and industrial water & wastewater treatment, coagulant aid ahead of anionic/nonionic polyelectrolyte flocculants, sludge dewatering aid, and paper-mill retention/drainage aid. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3. Not for use in direct contact with food/potable water unless the specific grade supplied is certified for that purpose.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:	
Eye Irrit. 2	Eye irritation, Category 2, H319

Based on available data, other GHS physical, health or environmental hazard classification criteria are not met for this product.

2.2 GHS label elements, including precautionary statements:

GHS: Warning

Hazard statements:

Eye Irrit. 2: H319 – Causes serious eye irritation.

Precautionary statements:

P264: Wash hands thoroughly after handling.
P280: Wear 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.
P337+P313: If eye irritation persists: Get medical advice/attention.

2.3 Other hazards which do not result in classification:

May contain trace unreacted diallyldimethylammonium chloride (DADMAC) monomer, controlled to low levels by the manufacturer per industry specification. Spilled product forms a slippery film on floors. This substance/mixture does not meet the PBT/VPvB criteria based on available data.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Poly(diallyldimethylammonium chloride), supplied as an aqueous solution

Identification	Chemical Name / Classification	Concentration
CAS: 26062-79-3	Poly(diallyldimethylammonium chloride) – Eye Irrit. 2	Available on request (typically 20 – 40% active polymer)
7732-18-5	Water – Not classified	Balance

3.2 Mixtures:

May contain trace residual DADMAC monomer (typically < 0.5% of polymer solids per industry specification) and minor formulation additives; exact content is proprietary to the manufacturer.
To obtain more information on the hazards of the components, consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

By skin contact:

Wash skin with soap and copious amounts of water. If irritation persists, call a physician.

By eye contact:

Flush with copious amounts of water for at least 15 minutes, separating the eyelids with fingers to assure adequate flushing. If irritation persists, call a physician.

By inhalation:

Remove to fresh air. If necessary, get medical attention.

By ingestion:

Do not induce vomiting. Rinse mouth with water. Get medical attention if discomfort occurs.

4.2 Most important symptoms/effects, acute and delayed:

Causes eye irritation. Symptoms detailed further in section 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Not relevant

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:
Suitable: Water spray, dry chemical, carbon dioxide or appropriate foam – product is an aqueous solution and is not itself flammable.
Unsuitable: None known.

5.2 Specific hazards arising from the chemical:
Non-flammable aqueous liquid. Thermal decomposition may release carbon oxides, nitrogen oxides, hydrogen chloride and amine fumes.

5.3 Special protective actions for fire-fighters:
Wear self-contained breathing apparatus and protective clothing in case of fire in the surrounding area. Cool fire-exposed containers with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Avoid contact with eyes. Use personal protective equipment as described in section 8. Spilled material is slippery – caution against falls.

6.2 Environmental precautions:
Prevent entry into drains, watercourses or soil where practicable. Contain spillage. Cationic polymer is toxic to aquatic organisms – avoid discharge to water bodies.

6.3 Methods and materials for containment and cleaning up:
Dike and contain spill. Absorb with inert material (sand, earth, vermiculite) or squeegee/pump into a suitable container for reuse or disposal. Flush residual traces with water; treat according to local regulations.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
Avoid contact with eyes. Use with adequate ventilation. Wash thoroughly after handling. Keep container tightly closed when not in use. Do not mix with strong oxidizers or anionic polymers/surfactants in concentrated form (may cause rapid precipitation/gelling).

7.2 Conditions for safe storage, including any incompatibilities:
Store in tightly closed original containers in a cool, dry, well-ventilated area, protected from freezing and direct sunlight. Keep away from strong oxidizing agents and anionic materials. Typical shelf life: 12 months from date of manufacture in unopened packaging.

7.3 Specific end use(s):
No special requirement beyond the uses specified in section 1.2. Dosing rates and application procedures are grade- and system-specific – consult Suraj Chemicals for guidance.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:
No specific occupational exposure limit is established for this formulation under the Factories Act, 1948 (as amended).

8.2 Appropriate engineering controls:
Use local exhaust ventilation where mist/aerosol may be generated. Emergency eyewash and safety shower should be accessible near the work area.

B. Respiratory protection:
Not normally required under normal handling; use a mist respirator if spraying/misting operations generate airborne droplets.

C. Specific protection for the hands:
Chemical-resistant gloves (nitrile or PVC).

D. Eye and face protection:
Chemical safety goggles.

E. Bodily protection:
Appropriate protective clothing for bulk handling. No smoking, drinking or eating at the working site; wash thoroughly after handling.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Item	Result
Physical state at 20°C	Liquid (aqueous solution)
Appearance	Clear to pale yellow liquid
Odor	Slight/characteristic
pH (as supplied)	3 – 6 (typical, grade-dependent)
Active polymer content	Available on request (grade-dependent, typically 20 – 40%)
Relative density at 20°C	1.02 – 1.10 (typical)
Viscosity at 20°C	50 – 400 cP (typical, grade/molecular-weight dependent)
Solubility in water	Fully miscible
Boiling point	> 100°C (aqueous solution)
Flash point	Non-applicable (aqueous solution)
Freezing point	Approx. 0°C to -5°C (protect from freezing)

Precise batch values are grade-dependent and available on request via the Certificate of Analysis.

9.2 Other information:

Explosive properties	Not relevant
Oxidising properties	None
Corrosive to metals	Not normally corrosive to common construction materials used in dosing systems

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:
Reacts with anionic polymers/surfactants (charge neutralisation, may cause precipitation/gelling if mixed concentrated). No other specific reactivity hazard identified under normal conditions.

10.2 Chemical stability:
Stable under normal temperatures and pressures. May be affected by prolonged exposure to freezing temperatures – store as per section 7.2.

10.3 Possibility of hazardous reactions:
Hazardous polymerization will not occur under normal storage conditions.

10.4 Conditions to avoid:

Freezing	Strong Oxidizers	Anionic Materials
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Avoid	Avoid contact	Avoid uncontrolled mixing
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10.5 Incompatible materials:

Strong oxidizing agents; anionic polymers, surfactants and dyes (charge neutralisation reaction).

10.6 Hazardous decomposition products:

None under normal conditions; thermal decomposition may release carbon oxides, nitrogen oxides, hydrogen chloride and amine fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Based on available data for polyDADMAC-type coagulants, the product causes eye irritation; classification criteria for acute toxicity, skin irritation, sensitisation, CMR and STOT are not met.

Product-specific toxicological information (reference: polyDADMAC class):

Test	Species/Route	Value
Acute oral toxicity	Rat	LD50 > 2,000 mg/kg
Acute dermal toxicity	Rabbit	LD50 > 2,000 mg/kg
Skin irritation	Rabbit	Non-irritant to mild irritant
Eye irritation	Rabbit	Irritant

Values are class-typical reference data for polyDADMAC coagulants; batch-specific toxicology testing has not been performed on this proprietary formulation.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Not established for this specific formulation. Cationic polyDADMAC-type coagulants are generally toxic to aquatic organisms (particularly fish and invertebrates) due to their cationic/surface-active character; avoid uncontrolled discharge to water bodies.

12.2 Persistence and degradability:

Not readily biodegradable; poly(DADMAC) is a high molecular weight, non-biodegradable synthetic polymer under standard test conditions.

12.3 Bioaccumulative potential:

Not expected to bioaccumulate (water-soluble, cationic polymer; strongly binds to sediment/organic matter rather than partitioning into lipids).

12.4 Mobility in soil:

Miscible with water; strongly adsorbs to negatively charged soil/sediment/clay particles due to cationic character, limiting mobility.

12.5 Results of PBT and vPvB assessment:

Not established for this formulation.

12.6 Other adverse effects:

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Dispose of via a licensed waste disposal contractor in accordance with local, state and national environmental regulations. Do not discharge to drains/watercourses without treatment. Rinse empty containers with water before disposal or recycling; do not reuse for food/potable purposes.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR/RID):

14.1 UN number	None – non-hazardous for transport
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	None
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by sea (IMDG/IMO):

14.1 UN number	None – non-hazardous for sea transport
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	None
14.4 Packing group	Non-applicable
14.5 Marine pollutant	No
14.6 Special precautions for user	None
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by air (IATA):

14.1 UN number	None – non-hazardous for air transport
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	None
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

Handle in accordance with general workplace chemical safety norms under the Factories Act, 1948 (as amended, 1987). Not classified as a hazardous chemical under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.

Other legislation:

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

H319: Causes serious eye irritation.

The phrases indicated refer to the substance identified in section 3 and are present for informative purposes.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, to facilitate comprehension of this safety data sheet and the product label.

Principal bibliographical sources:

General public reference data for poly(diallyldimethylammonium chloride) (CAS 26062-79-3) class chemistry.

Abbreviations and acronyms:

LD50: Lethal Dose 50 | PPE: Personal Protective Equipment | DADMAC: Diallyldimethylammonium chloride | PBT: Persistent, Bioaccumulative and Toxic | vPvB: very Persistent, very Bioaccumulative

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET