

CATIONIC POLYMER LIQUID COAGULANT

Date of compilation: 10-08-2026 | Revised: 10-08-2026 | Version: 1

SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

CATIONIC POLYMER LIQUID COAGULANT

Low-to-medium molecular weight cationic polymer solution

CAS: Proprietary polymer blend (aqueous solution of a cationic organic polymer, e.g. polyamine/poly-DADMAC type coagulant class) – exact formulation is manufacturer-proprietary; full composition available on request.

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Primary coagulant for raw water clarification, effluent treatment, sludge conditioning and colour/turbidity reduction in municipal and industrial water treatment plants. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3.

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:

Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on data available for this class of cationic liquid coagulant.

Eye Irrit. 2	Eye irritation, Category 2, H319
Skin Irrit. 2	Skin irritation, Category 2, H315

2.2 GHS label elements, including precautionary statements:

GHS: Warning

Hazard statements:

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

Skin Irrit. 2: H315 – Causes skin irritation.

Precautionary statements:

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection.

P302+P352: IF ON SKIN: Wash with plenty of water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards which do not result in classification:

Product/spilled solution creates very slippery surfaces. Not a PBT/vPvB substance based on available information.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures:

Chemical description: Aqueous solution of a cationic organic polymer coagulant, water balance.

Identification	Chemical Name / Classification	Concentration
Proprietary	Cationic organic polymer coagulant – Eye Irrit. 2 H319; Skin Irrit. 2 H315	10–50% (grade dependent – exact % available on request)
CAS: 7732-18-5	Water – Not classified	Balance

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance immediately, showing the SDS of this product, if symptoms occur or persist.

By inhalation:

Remove the person affected to fresh air and keep at rest.

By skin contact:

Remove contaminated clothing. Wash skin thoroughly with plenty of water and soap. Seek medical attention if irritation persists.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek immediate medical attention.

By ingestion/aspiration:

Rinse mouth with water. Do not induce vomiting. Give water to drink if the person is conscious. Seek medical advice.

4.2 Most important symptoms/effects, acute and delayed:

Eye and skin irritation. See sections 2 and 11.

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

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media:**
Suitable: Water spray/fog, foam, dry chemical powder, carbon dioxide (product is an aqueous solution, non-flammable).
Unsuitable: None known
- 5.2 Specific hazards arising from the chemical:**
Not flammable. Aqueous solution. Combustion of the organic polymer content (in a surrounding fire) may produce carbon monoxide, carbon dioxide and oxides of nitrogen.
- 5.3 Special protective actions for fire-fighters:**
Wear self-contained breathing apparatus and full protective clothing in case of surrounding fire. Cool fire-exposed containers with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures:**
For non-emergency personnel:
Use appropriate PPE (see Section 8). Note extreme slip hazard on spilled product.
For emergency responders:
Wear protective equipment. Ventilate the area.
- 6.2 Environmental precautions:**
Prevent entry into drains, watercourses and soil.
- 6.3 Methods and materials for containment and cleaning up:**
Contain spill with sand/inert absorbent, collect into a labelled container for disposal/reuse. Wash residual area with water (small quantities only, per local discharge regulation) – do not flush concentrated product to drain.
- 6.4 Reference to other sections:**
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling:**
A. General precautions for safe use:
Avoid contact with eyes and skin. Keep containers closed when not in use.
B. Technical recommendations for the prevention of fires and explosions:
Non-flammable aqueous product – no special fire prevention measures required beyond good housekeeping.
C. Technical recommendations on general occupational hygiene:
Do not eat, drink or smoke while handling. Wash hands after handling.
D. Technical recommendations to prevent environmental risks:
Provide bunding for bulk storage tanks. Prevent product from entering drains or watercourses.
- 7.2 Conditions for safe storage, including any incompatibilities:**
A. Specific storage requirements:
- | | |
|---|----------------------|
| Minimum Temp. | 5°C (avoid freezing) |
| Maximum Temp. | 35°C |
| Maximum time (unopened, original packaging) | 6–12 Months |
- B. General conditions for storage:**
Store in tightly closed original containers, in a cool, dry, well-ventilated place, protected from direct sunlight and freezing temperatures. Store in compatible containers (HDPE/lined MS) as per manufacturer's recommendation.
- 7.3 Specific end use(s):**
Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 Control parameters:**
No specific occupational exposure limit has been established for this product under the Factories Act, 1948.
- 8.2 Appropriate engineering controls:**
General ventilation is normally sufficient. Consult manufacturer's leaflet for storage, use, cleaning and maintenance of PPE.
- B. Respiratory protection:**
Not normally required under normal conditions of use; use if mist/aerosol is generated.
- C. Specific protection for the hands:**
Chemical-resistant gloves (nitrile or PVC).
- D. Eye and face protection:**
Chemical splash goggles.
- E. Bodily protection:**
Chemical-resistant apron/coveralls; non-slip footwear.
- F. Additional emergency measures:**
Eyewash station and safety shower should be available.
- Environmental exposure controls:**
Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties:**

Appearance	
Physical state at 20°C	Liquid
Appearance	Viscous liquid
Color	Colorless to pale yellow
Odor	Faint / characteristic
Odour threshold	Not relevant *
Volatility	
Boiling point at atmospheric pressure	≈100°C (water-based)
Vapour pressure at 20°C / 50°C	≈ that of water
Evaporation rate at 20°C	≈ that of water

Product Description	
Density / Relative density at 20°C	Approx. 1.02–1.10 g/cm³
Dynamic / Kinematic viscosity	Moderate to high (grade dependent) – available on request
Concentration	10–50% active polymer (grade dependent)
pH (as supplied)	Approx. 3–6 (mildly acidic, grade dependent)
Vapour density at 20°C	Not relevant *
Partition coefficient n-octanol/water 20°C	Not relevant (ionic polymer)
Solubility in water at 20°C	Fully miscible
Decomposition temperature	Not established for this grade
Melting point/freezing point	≈0°C (freezes; avoid freeze/thaw cycling)
Flammability	
Flash Point	Non-applicable (aqueous solution)
Flammability (solid, gas)	Non-applicable
Autoignition temperature	Not relevant *
Lower / Upper flammability limit	Not relevant *
Particle Characteristics	
Median equivalent diameter	Non-applicable (liquid)

* Not relevant due to the nature of the product, not providing information on the properties of its hazards.

9.2 Other information:

Explosive properties	Not explosive
Oxidising properties	Not an oxidizer
Corrosive to metals	Not classified as corrosive to metals
Heat of combustion	Not relevant *
Surface tension at 20°C	Not relevant *
Refraction index	Not relevant *

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Not reactive under normal conditions of use. May react with strong oxidizing agents.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use. Avoid freezing, which can cause irreversible phase separation.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions are not expected.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Avoid prolonged high heat	Avoid prolonged direct exposure	Not applicable (aqueous)

10.5 Incompatible materials:

Strong Oxidizers	Strong Acids/Alkalis	Anionic Polymers (undiluted contact)
Avoid contact	Avoid contact (destabilization)	May cause premature gelling if mixed undiluted

10.6 Hazardous decomposition products:

Thermal decomposition may release carbon monoxide, carbon dioxide and oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Quantitative endpoint data specific to this proprietary grade is not published by the manufacturer – Available on request. General class data for cationic liquid coagulants indicates low acute oral/dermal toxicity with irritant properties to eyes and skin at the concentrated (as-supplied) form.

A. Ingestion (acute effect):

May cause gastrointestinal irritation if swallowed.

B. Inhalation (acute effect):

Mist may cause irritation of the respiratory tract.

C. Contact with skin and eyes (acute effect):

Causes skin irritation. Causes serious eye irritation.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data.

E. Sensitizing effects:

Classification criteria for respiratory or skin sensitisation are not met based on available data.

F. Specific target organ toxicity (STOT) – single exposure:

Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure:

Classification criteria are not met based on available data.

H. Aspiration hazard:

Classification criteria are not met based on available data.

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Finished product (class data)	Oral LD50: >2000 mg/kg (typical for this polymer class, not batch-specific – available on request)	Rat

SECTION 12: ECOLOGICAL INFORMATION

Quantitative aquatic toxicity data specific to this grade is not published – Available on request.

12.1 Toxicity:

Cationic polymer coagulants as a class can be toxic to fish and aquatic invertebrates at concentrated/undiluted levels due to charge-driven interaction with gill membranes; toxicity decreases rapidly with dilution and adsorption to suspended solids, which is the mechanism of the product's intended use.

12.2 Persistence and degradability:

Not readily biodegradable; degrades slowly via hydrolysis/UV over time.

12.3 Bioaccumulative potential:

Not expected to bioaccumulate significantly.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not relevant	Not relevant	Low mobility (binds to soil particles)	Low mobility

12.5 Results of PBT and vPvB assessment:

Not expected to meet PBT/vPvB criteria based on available information.

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Do not discharge undiluted product to drains or watercourses. Dilute product may be used within its intended dosing process; excess/off-spec material should be disposed of as per local industrial effluent/waste regulations. Empty containers may retain product residue. Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Marine pollutant	No
14.6 Special precautions for user	Not regulated
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	Not regulated
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

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

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 (India)
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Public Liability Insurance Act, 1991

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:

H315: Causes skin irritation.
H319: Causes serious eye irritation.
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

The United Nations Economic Commission for Europe (UNECE); publicly available GHS classification reference data for cationic liquid coagulant/polymer products of this class.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50 | Koc: Partition coefficient of organic carbon | 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