

ANIONIC POLYMER LIQUID DISPERSANT — STANDARD GRADE

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

ANIONIC POLYMER LIQUID DISPERSANT – Standard Grade  
Sodium polyacrylate-type liquid dispersant / scale inhibitor  
CAS: Proprietary polymer blend (principal reference component: sodium polyacrylate, CAS 9003-04-7)

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Anionic dispersant/scale-inhibiting polymer used in cooling water treatment, boiler water treatment, RO/membrane pre-treatment, descaling and antiscalant formulations, and as a dispersing aid for inorganic solids (calcium carbonate, calcium sulphate, iron oxide) in industrial process water. 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:

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

Classification is based on the acidic to mildly acidic pH typical of this grade (see section 9). Grade-to-grade pH varies; consult the batch Certificate of Analysis.

2.2 GHS label elements, including precautionary statements:

GHS: Warning

Hazard statements:

Skin Irrit. 2: H315 – Causes skin irritation.  
Eye Irrit. 2: H319 – Causes serious eye 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.

2.3 Other hazards which do not result in classification:

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:

Non-applicable – this product is an aqueous polymer formulation (see 3.2).

3.2 Mixtures:

| Identification             | Chemical Name / Classification                                      | Concentration                                  |
|----------------------------|---------------------------------------------------------------------|------------------------------------------------|
| CAS: 9003-04-7 (reference) | Sodium polyacrylate (anionic polyacrylate polymer) – Not classified | Available on request (proprietary formulation) |
| 7732-18-5                  | Water – Not classified                                              | Balance                                        |

Exact polymer composition, molecular weight and formulation additives are 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:

Remove contaminated clothing. Wash skin immediately with plenty of soap and water. If irritation persists, seek medical attention.

By eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses if present and easy to do. If irritation persists, seek medical attention.

By inhalation:

Remove to fresh air. If breathing is difficult, give oxygen; if not breathing, give artificial respiration and get medical attention.

By ingestion:

Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 Most important symptoms/effects, acute and delayed:

Causes skin and eye irritation. Symptoms detailed further in section 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, 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 monoxide, carbon dioxide and sodium oxides.
- 5.3 Special protective actions for fire-fighters:**  
Wear self-contained breathing apparatus and full 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 skin and eyes. Use personal protective equipment as described in section 8. Ensure adequate ventilation. Spilled material is slippery – caution against falls.
- 6.2 Environmental precautions:**  
Prevent entry into drains, watercourses or soil. Contain spillage with an inert absorbent.
- 6.3 Methods and materials for containment and cleaning up:**  
Dike and contain spill. Absorb with inert material (sand, earth, vermiculite) and transfer to a suitable container for 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 skin and eyes. Use with adequate ventilation. Wash thoroughly after handling. Keep container tightly closed when not in use. Do not mix with strong oxidizers or strong alkalis unless as directed by application dosing procedure.
- 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 strong bases. 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 or face shield.
- E. Bodily protection:**  
Acid-resistant apron/protective clothing recommended 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 straw/amber liquid                           |
| Odor                     | Mild / characteristic                                      |
| pH (as supplied)         | 2.5 – 4.5 (typical, grade-dependent)                       |
| Active solids content    | Available on request (grade-dependent, typically 20 – 45%) |
| Relative density at 20°C | 1.05 – 1.20 (typical)                                      |
| Viscosity at 20°C        | Low viscosity, free-flowing liquid                         |
| 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  | May be mildly corrosive to mild steel/carbon steel at low pH; not corrosive to stainless steel or plastics normally used for dosing systems |

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:**  
No specific reactivity hazard identified under normal conditions of use and storage.
- 10.2 Chemical stability:**  
Stable under normal temperatures and pressures. May be affected by prolonged exposure to freezing temperatures (may cause irreversible phase separation) – store as per section 7.2.
- 10.3 Possibility of hazardous reactions:**  
Hazardous polymerization will not occur.
- 10.4 Conditions to avoid:**

| Freezing | Strong Oxidizers | Strong Alkalis            |
|----------|------------------|---------------------------|
| Avoid    | Avoid contact    | Avoid uncontrolled mixing |

**10.5 Incompatible materials:**  
Strong oxidizing agents; strong alkalis/bases (uncontrolled mixing may cause exothermic neutralisation).

**10.6 Hazardous decomposition products:**  
None under normal conditions; thermal decomposition may release carbon oxides and sodium oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects:**  
Based on available data for polyacrylate-type dispersants, the classification criteria for acute toxicity, CMR, sensitisation and STOT are not met.

**Product-specific toxicological information (reference: sodium polyacrylate class):**

| Test                  | Species/Route | Value                                 |
|-----------------------|---------------|---------------------------------------|
| Acute oral toxicity   | Rat           | LD50 > 5,000 mg/kg                    |
| Acute dermal toxicity | Rabbit        | LD50 > 2,000 mg/kg                    |
| Skin irritation       | Rabbit        | Mild to moderate irritant (acidic pH) |
| Eye irritation        | Rabbit        | Irritant (acidic pH)                  |

Values are class-typical reference data for anionic polyacrylate dispersants; 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. Sodium polyacrylate-type dispersants are generally of low aquatic toxicity; avoid uncontrolled discharge due to low pH and dispersant action on suspended solids.

**12.2 Persistence and degradability:**  
Polyacrylate polymers show limited biodegradability under standard test conditions; not readily biodegradable.

**12.3 Bioaccumulative potential:**  
Not expected to bioaccumulate (high molecular weight, water-soluble polymer).

**12.4 Mobility in soil:**  
Miscible with water; expected to be mobile in aqueous environments.

**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:**  
Neutralise if necessary and 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 listed as a scheduled hazardous chemical under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, but standard irritant-handling precautions apply.

Other legislation:

The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)

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 alone; they reflect the general hazard profile of this substance class 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 sodium polyacrylate / anionic polyacrylate dispersant class chemistry.

Abbreviations and acronyms:

LD50: Lethal Dose 50 | PPE: Personal Protective Equipment | 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