



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
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Safety Data Sheet (MSDS)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

Reverse Osmosis Antiscalant (PESA) Aqueous Solution (Polyepoxysuccinic Acid)

SECTION 1: Identification

1.1 Product Identifiers - Product Name: Reverse Osmosis Antiscalant (PESA) Aqueous Solution - Product Number: PESA-RO-CAS1528987-202802 - Brand: SIGALD - CAS-No.: 1528-98-7 - Synonyms: PESA; Polyepoxysuccinic Acid; RO Antiscalant - Chemical Family: Polycarboxylic Acid Polymer

1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
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- Telephone : +86-021-50350029
- Fax : +86-021-50350029

1.3 Emergency telephone

Emergency Phone # : +86-021-50350029
(CHEMTREC)

1.4 Uses & Restrictions - Identified Uses: Antiscalant for reverse osmosis (RO), nanofiltration (NF), ultrafiltration (UF) systems; prevents scale formation in water treatment systems (cooling water, boiler feed water). - Uses Advised Against: Food contact (direct); medical application; use beyond recommended dosage in RO systems.

SECTION 2: Hazards Identification

2.1 GHS Classification: Skin irritation (Category 2); Eye irritation (Category 2A); Aquatic hazard (Category 2)

2.2 GHS Label Elements - Hazard Pictogram: (Irritant) + (Aquatic hazard) - Signal Word: WARNING - Hazard Statements: H315 (Causes skin irritation); H319 (Causes serious eye irritation); H411 (Toxic to aquatic life with long-lasting effects) - Precautionary Statements: P264, P280, P302+P352, P305+P351+P338, P332+P313, P337+P313, P391, P501

2.3 Physical/Chemical Hazards: Non-flammable; incompatible with strong oxidizers and strong acids; no risk of explosion or decomposition under normal storage conditions.

2.4 Health Hazards: Skin irritation (redness, itching); eye irritation (redness, tearing); inhalation of mist may cause mild respiratory discomfort; ingestion may cause gastrointestinal upset (nausea, vomiting).

2.5 Environmental Hazards: Toxic to aquatic organisms; but biodegradable, no persistent accumulation in the environment.

SECTION 3: Composition/Information on Ingredients

Substance/Mixture: Mixture

Component	Content (w/w)	CAS-No.	Hazard Classification
Polyepoxysuccinic Acid (PESA, Active Ingredient)	30.0-32.0%	1528-98-7	Skin Irrit. 2; Eye Irrit. 2A; Aquatic Toxicity 2
Deionized Water	67.0-69.0%	7732-18-5	Non-hazardous
Sodium Hydroxide (Stabilizer)	0.5-1.0%	1310-73-2	Skin Corros. 1B; Eye Dam. 1

SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; if breathing is difficult, provide oxygen; seek medical attention if discomfort persists. - Skin Contact: Remove contaminated clothing; rinse skin thoroughly with plenty of running water for 10-15 minutes; apply emollient if irritation occurs; seek medical help if redness persists. - Eye Contact: Hold eyelids open; rinse eyes continuously with clean water or normal saline for 15-20 minutes; do not rub eyes; seek emergency medical help immediately. - Swallowed: Do not induce vomiting; rinse mouth with water; drink plenty of water to dilute; seek medical attention with this MSDS.

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Water spray, foam, CO₂, dry powder. - Unsuitable Media: No specific restrictions (non-flammable). - Special Hazards: Non-flammable; decomposes at high temperature (>200°C) to release non-toxic fumes (carbon dioxide, water vapor). - Firefighter Advice: Wear general firefighting protective equipment; no need for special respiratory protection unless in confined spaces.

SECTION 6: Accidental Release Measures

- Personal Precautions: Wear protective gloves, goggles, and protective clothing; avoid direct contact with spilled material. - Environmental Precautions: Prevent runoff into sewers, rivers, or other water bodies; use absorbent materials to contain spills. - Cleanup: Small spill - absorb with inert materials (vermiculite, diatomaceous earth) and dispose of as solid waste; large spill - dike the area, collect the spilled liquid into corrosion-resistant containers, and treat by professional institutions.

SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated area; avoid generating mist or aerosol; wash hands thoroughly after handling; do not mix with strong acids or oxidizers. - Storage: Store in cool, dry, well-ventilated warehouse (5-30°C); keep container tightly closed; avoid direct sunlight and high temperature; store separately from strong acids, oxidizers, and food-grade materials. - Shelf Life: 12 months (unopened, specified conditions); use promptly after opening, seal tightly after each use.



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SECTION 8: Exposure Controls/Personal Protection

- Engineering Controls: Install local exhaust ventilation if mist is generated; maintain good ventilation in the workplace. - PPE: Chemical-resistant gloves (nitrile or neoprene), safety goggles, and protective clothing; wear a dust/mist mask if working in confined spaces. - Hygiene Measures: Do not eat, drink, or smoke in the workplace; avoid touching eyes, face, or mouth with contaminated hands; change contaminated clothing promptly.

SECTION 9: Physical and Chemical Properties

Physical State: Liquid; Color: Colorless to pale yellow; Odor: Odorless or slight characteristic odor pH (25°C, 1% Solution): 7.0-9.0; Density (25°C): 1.15-1.25 g/cm³; Viscosity (25°C): 20-50 mPa·s Boiling Point: 105-110°C (aqueous solution); Flash Point: Not applicable (non-flammable); Solubility: Fully miscible with water Decomposition Temperature: >200°C; Vapor Pressure (25°C): <0.5 hPa; Partition Coefficient (log P): -2.5 (estimated)

SECTION 10: Stability and Reactivity

- Stability: Stable under normal storage and handling conditions; no decomposition occurs within the shelf life. - Incompatibilities: Strong acids (HCl, H₂SO₄), strong oxidizers (H₂O₂, ClO₂); mixing with strong acids may reduce antiscalant efficiency. - Hazardous Decomposition Products: No hazardous decomposition products under normal use conditions; decomposes at high temperature to release carbon dioxide and water vapor.

SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD₅₀): >5000 mg/kg (30% solution); Dermal (Rabbit, LD₅₀): >2000 mg/kg - Skin/Eye Irritation: Mild skin irritation (Category 2); moderate eye irritation (Category 2A); no corrosive effects. - Respiratory Toxicity: Inhalation of mist causes mild respiratory tract irritation; no long-term respiratory damage.

SECTION 12: Ecological Information

- Fish (Zebrafish, LC₅₀): 120 mg/L (96-hour exposure) - Daphnia (EC₅₀): 85 mg/L (48-hour exposure) - Biodegradability: Biodegradable (BOD₅/COD > 0.3); no persistent accumulation in soil or water.

SECTION 13: Disposal Considerations

- Product Waste: Dilute with water (1:10) and treat in accordance with local wastewater treatment regulations; or dispose of via licensed hazardous waste treatment facilities. - Packaging Waste: Rinse thoroughly with water; dispose of as general solid waste or recycle if permitted.

SECTION 14: Transport Information

- UN Number: ADR/RID: UN 3267; IMDG: UN 3267; IATA-DGR: UN 3267 - UN Proper Shipping Name: Corrosive liquid, basic, organic, n.o.s. (Polyepoxysuccinic Acid) - Transport Class: 8 (Corrosive); Packaging Group: III; Environmental Hazards: Yes (Marine Pollutant) - Special Precautions:



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Transport in corrosion-resistant HDPE or steel drums; avoid collision, leakage, and exposure to sunlight/heat; do not transport with strong acids or oxidizers.

SECTION 15: Regulatory Information

- National Regulations (China): Complies with Hazardous Chemical Safety Management Regulation; meets GB/T 22232-2008 (Polyepoxysuccinic Acid) and GB/T 30300-2013 (Water Treatment Agents for Reverse Osmosis Systems). - International Regulations: GHS Rev.9 (Irritant 2, Aquatic Toxicity 2); REACH (EU, registered); TSCA (US, listed).

SECTION 16: Other Information

- Revision Date: 05 FEB 2025 - Disclaimer: Based on current scientific knowledge; supplier not liable for damage caused by improper use or storage.

