



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

Safety Data Sheet (MSDS)

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

Strong Acid Cation Exchange Resin (Styrene-DVB Copolymer with Sulfonic Acid Groups)

SECTION 1: Identification

1.1 Product Identifiers - Product Name: Strong Acid Cation Exchange Resin - Product Number: SACR-CAS39339850-202802 - Brand: SIGALD - CAS-No.: 39339-85-0 - Synonyms: SAC Resin; Sulfonated Polystyrene-DVB Resin; Cation Exchange Resin - Chemical Family: Crosslinked Polymer with Sulfonic Acid Functional Groups

1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
- RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI)PILOT FREE TRADE ZONE.
- Telephone : +86-021-50350029
- Fax : +86-021-50350029

1.3 Emergency telephone

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

1.4 Uses & Restrictions - Identified Uses: Water treatment (softening, desalination, demineralization); industrial wastewater treatment; chemical separation and purification; food and beverage processing (water purification); pharmaceutical industry purification. - Uses Advised Against: Direct food contact without prior purification; medical injection; use in strong oxidizing or high-temperature (>120°C) environments beyond product limits.

SECTION 2: Hazards Identification

2.1 GHS Classification: Skin irritation (Category 2); Eye irritation (Category 2A); Respiratory irritation (Category 3); Aquatic hazard (Category 3)

2.2 GHS Label Elements - Hazard Pictogram: (Irritant) + (Aquatic hazard) - Signal Word: WARNING - Hazard Statements: H315 (Causes skin irritation); H319 (Causes serious eye irritation); H335 (May cause respiratory irritation); H412 (Harmful to aquatic life with long-lasting effects) - Precautionary Statements: P261, P264, P280, P302+P352, P304+P340, P305+P351+P338, P312, P337+P313, P391, P501

2.3 Physical/Chemical Hazards: Non-flammable; non-explosive; incompatible with strong oxidizers (e.g., chlorine, hydrogen peroxide) and strong bases at high concentrations; decomposes at temperatures >150°C to release toxic fumes (sulfur oxides, aromatic hydrocarbons).

2.4 Health Hazards: Skin irritation (redness, dryness, itching) from dust or resin beads; eye irritation (redness, tearing, discomfort) from dust or direct contact; inhalation of fine dust may cause mild respiratory tract irritation (coughing, sore throat); ingestion is unlikely but may cause gastrointestinal upset (nausea, vomiting).

2.5 Environmental Hazards: Harmful to aquatic organisms; slow biodegradability; may accumulate in sediment but does not bioaccumulate in aquatic organisms.

SECTION 3: Composition/Information on Ingredients



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

Substance/Mixture: Mixture (Crosslinked Polymer with Functional Groups)

Component	Content (w/w)	CAS-No.	Hazard Classification
Styrene-DVB Copolymer (Sulfonated, Active Component)	98.0-99.0%	39339-85-0	Skin Irrit. 2; Eye Irrit. 2A; Resp. Irrit. 3; Aquatic Toxicity 3
Residual Styrene (Impurity)	≤ 0.5%	100-42-5	Skin Sens. 1; Repr. 2; Aquatic Toxicity 2
Water (Moisture)	45-55%	7732-18-5	Non-hazardous

SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; keep the affected person at rest in a comfortable position; if coughing or respiratory discomfort persists, seek medical attention. - Skin Contact: Remove contaminated clothing; rinse skin thoroughly with plenty of running water for 10-15 minutes; if irritation occurs, apply emollient and seek medical help if symptoms persist. - 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; if large quantities are ingested, seek medical attention with this MSDS.

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Water spray, foam, CO₂, dry powder, sand. - Unsuitable Media: No specific restrictions (non-flammable), but avoid high-pressure water jet which may disperse resin dust. - Special Hazards: Non-flammable under normal conditions; decomposes at high temperature (>150°C) to release toxic fumes (sulfur dioxide, styrene vapor, aromatic hydrocarbons); resin dust may form explosive mixtures in air at high concentrations. - Firefighter Advice: Wear full firefighting protective equipment (including self-contained breathing apparatus); keep a safe distance; cool containers with water spray; avoid inhalation of decomposition fumes.

SECTION 6: Accidental Release Measures

- Personal Precautions: Wear dust mask, chemical-resistant gloves, safety goggles, and protective clothing; avoid direct contact with spilled resin and dust. - Environmental Precautions: Prevent resin beads and dust from entering sewers, rivers, or other water bodies; isolate the spilled area to avoid environmental contamination. - Cleanup: Small spill - collect resin beads with a clean shovel or vacuum cleaner (equipped with dust filter), place in a sealed container for disposal; large spill - dike the area, collect all resin beads, and treat by professional institutions; clean the area with water (avoid washing into water bodies).

SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated area; avoid generating resin dust (use wet methods if necessary); wear personal protective equipment during handling; avoid mixing with strong oxidizers and strong bases; do not drop or impact resin containers to prevent bead breakage.



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- Storage: Store in cool, dry, well-ventilated warehouse (5-35°C); keep container tightly closed to prevent moisture loss and dust contamination; avoid direct sunlight and high temperature; store separately from strong oxidizers, strong bases, and food-grade materials; stack containers stably to prevent tipping. - Shelf Life: 24 months (unopened, specified conditions, kept moist); if resin dries out, rehydrate slowly with deionized water before use (avoid rapid hydration to prevent bead cracking); use promptly after opening.

SECTION 8: Exposure Controls/Personal Protection

- Engineering Controls: Install local exhaust ventilation to remove resin dust; maintain good ventilation in the workplace; use dust-collecting equipment during handling and crushing (if needed). - PPE: Dust mask (N95 or equivalent) for dust protection; chemical-resistant gloves (nitrile or rubber); safety goggles or face shield; protective clothing (anti-dust); wear respiratory protection in confined spaces or high-dust environments. - Hygiene Measures: Do not eat, drink, or smoke in the workplace; wash hands thoroughly with soap and water after handling; avoid touching eyes, face, or mouth with contaminated hands; change contaminated clothing promptly.

SECTION 9: Physical and Chemical Properties

Physical State: Solid (spherical beads); Color: Light yellow to amber; Odor: Odorless or slight aromatic odor (from residual styrene) pH (25°C, 1% Slurry): 1.0-3.0 (acidic); Bulk Density (Wet): 0.75-0.85 g/cm³; Particle Size: 0.315-1.25 mm Melting Point: Not applicable (decomposes before melting); Boiling Point: Not applicable; Flash Point: Not applicable (non-flammable) Decomposition Temperature: >150°C; Solubility: Insoluble in water and common organic solvents; Vapor Pressure (25°C): <0.1 hPa Hardness: 2-3 (Mohs scale); Water Absorption: 45-55% (moisture content)

SECTION 10: Stability and Reactivity

- Stability: Stable under normal storage and handling conditions; maintains exchange capacity and physical properties within the shelf life; stable in acidic and neutral environments; gradual degradation in strong alkaline environments at high temperatures (>100°C). - Incompatibilities: Strong oxidizers (chlorine, hydrogen peroxide, nitric acid) which may oxidize sulfonic acid groups and degrade the resin; strong bases (sodium hydroxide, potassium hydroxide) at high concentrations and temperatures which may cause resin swelling and structural damage. - Hazardous Decomposition Products: At temperatures >150°C, decomposes to release sulfur dioxide (SO₂), styrene vapor, and aromatic hydrocarbons; contact with strong oxidizers may generate toxic chlorine-containing compounds.

SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD₅₀): >5000 mg/kg (dry resin); Dermal (Rabbit, LD₅₀): >2000 mg/kg; Inhalation (Rat, LC₅₀): >5 mg/m³ (4-hour exposure, resin dust). - Skin/Eye Irritation: Mild skin irritation (Category 2) from dust and resin beads; moderate eye irritation (Category 2A) from dust and direct contact; no corrosive effects. - Respiratory Toxicity: Inhalation of fine resin dust may cause mild respiratory tract irritation (Category 3); no long-term respiratory damage with proper protection. - Other Toxicity: No mutagenic, carcinogenic, or teratogenic effects reported; residual styrene (≤0.5%) may cause skin sensitization in sensitive individuals.

SECTION 12: Ecological Information



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- Fish (Zebrafish, LC₅₀): >100 mg/L (96-hour exposure, wet resin) - Daphnia (EC₅₀): >50 mg/L (48-hour exposure, wet resin) - Algae (Growth Inhibition, EC₅₀): >100 mg/L (72-hour exposure)
- Biodegradability: Slowly biodegradable (BOD₅ /COD < 0.2); resin beads do not dissolve in water and may settle in sediment; no bioaccumulation in aquatic organisms. - Environmental Fate: Resistant to hydrolysis and photodegradation; in natural water bodies, settles to the bottom and is not easily transported.

SECTION 13: Disposal Considerations

- Product Waste: Spent resin (after use) should be regenerated if possible; if regeneration is not feasible, solidify with cement or lime, then dispose of via licensed hazardous waste treatment facilities in accordance with local regulations; do not landfill or incinerate without treatment. - Packaging Waste: Rinse packaging containers thoroughly with water; dispose of as general solid waste if no residual resin remains, or as hazardous waste if contaminated; recycle packaging materials if permitted. - Special Disposal Notes: Do not discharge resin beads or dust into water bodies; incineration of resin requires professional equipment to treat toxic decomposition fumes (sulfur dioxide, styrene).

SECTION 14: Transport Information

- UN Number: ADR/RID: UN 3077; IMDG: UN 3077; IATA-DGR: UN 3077 - UN Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Strong Acid Cation Resin) - Transport Class: 9 (Miscellaneous Dangerous Goods); Packaging Group: III; Environmental Hazards: Yes (Marine Pollutant) - Special Precautions: Transport in sealed, corrosion-resistant packaging (HDPE drums or fiber drums with inner plastic bags); avoid collision, vibration, and impact to prevent packaging damage and resin leakage; keep away from strong oxidizers and strong bases during transport; store in a cool, ventilated area during transit; no special temperature control required (avoid freezing and high temperature).

SECTION 15: Regulatory Information

- National Regulations (China): Complies with Hazardous Chemical Safety Management Regulation; meets GB/T 13659-2008 (Cation Exchange Resins for Water Treatment) and GB 5749-2022 (Drinking Water Hygienic Standard) for water treatment applications. - International Regulations: GHS Rev.9 (Irritant 2, Resp. Irrit. 3, Aquatic Toxicity 3); REACH (EU, registered); TSCA (US, listed); FDA (US, compliant for food contact water treatment).

SECTION 16: Other Information

- Revision Date: 10 FEB 2025 - Disclaimer: Based on current scientific knowledge and product testing data; supplier not liable for damage caused by improper use, storage, or handling beyond product specifications.