



# 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)

### Polyepoxysuccinic Acid (PESA)

#### SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

##### 1.1 Product Identifiers

- Product Name: Polyepoxysuccinic Acid (PESA)
- Product Number: PESA-CAS1528987-202605
- Brand: SIGALD
- CAS-No.: 1528-98-7
- Synonyms: PESA; Polyepoxy Succinic Acid; Epoxysuccinic Acid Homopolymer
- Chemical Family: Polycarboxylic Acid Polymer

##### 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 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

- Identified Uses: Water treatment (scale inhibitor, corrosion inhibitor) for industrial circulating water, cooling water systems, boiler water, reverse osmosis (RO) systems, and desalination plants; detergent additive; metal surface treatment agent.
- Uses Advised Against: Pharmaceutical, food, or direct oral consumption; not for use in cosmetic formulations without prior compatibility testing.

#### SECTION 2: Hazards Identification

Summary of Emergency Measures: Colorless to pale yellow transparent liquid. Low toxicity, mild irritation. After inhalation: Move to fresh air if discomfort occurs; no special treatment needed for mild irritation. In case of skin contact: Rinse skin with plenty of running water for 5-10 minutes; consult a doctor if redness or itching persists. After eye contact: Rinse eyes thoroughly with running water or normal saline for 10-15 minutes; seek medical attention if irritation continues. After swallowing: Rinse mouth with water; do not induce vomiting; consult a doctor if gastrointestinal discomfort (nausea, abdominal pain) occurs. Non-combustible, no explosion risk.

##### 2.1 GHS Classification

- Skin irritation (Category 3)
- Eye irritation (Category 3)
- Environmental Hazards: Not classified as hazardous to the environment (GHS 0 category for ecology)



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## 2.2 GHS Label Elements

- Hazard Pictogram: None (low hazard)
- Signal Word: WARNING
- Hazard Statements:
  - H316: Causes mild skin irritation
  - H320: Causes mild eye irritation
- Precautionary Statements:
  - P264: Wash skin thoroughly after handling
  - P280: Wear protective gloves/eye 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
  - P332+P313: If skin irritation occurs: Get medical advice/attention

## 2.3 Physical and Chemical Hazards

- Based on current information: No physical hazards (non-flammable, non-explosive, non-corrosive to metals).
- Chemical stability: Stable under normal use and storage conditions; no hazardous chemical reactions under recommended handling.

## 2.4 Health Hazards

- Acute Health Hazards: Mild skin and eye irritation; no acute toxicity via oral, dermal, or inhalation routes.
- Chronic Health Hazards: No known chronic toxic effects based on long-term exposure data; no carcinogenic, mutagenic, or reproductive toxic properties.
- Sensitization: No known skin or respiratory sensitizing effects.

## 2.5 Environmental Hazards

- Low toxicity to aquatic organisms (fish, daphnia, algae); fully biodegradable (BOD<sub>5</sub> /COD > 0.5) without eutrophication risk.
- No bioaccumulation potential in aquatic or terrestrial ecosystems.

## 2.6 Other Hazards

- No additional hazards identified; compatible with most water treatment chemicals (excluding strong oxidizing agents at high concentrations).

## SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Mixture (Polymer Aqueous Solution)

3.1 Main Components	Content (w/w)	CAS-No.	EC-No.	Hazard Classification
Polyepoxysuccinic Acid (PESA)	30.0-40.0%	1528-98-7	618-478-8	Skin Irrit. 3; Eye Irrit. 3
Deionized Water	60.0-70.0%	7732-18-5	231-791-2	Non-hazardous

- Hazardous Ingredients: None (main component is low-hazard polymer; no restricted substances per REACH SVHC List)

## SECTION 4: First Aid Measures

### 4.1 Description of First-Aid Measures

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- If Inhaled:
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  - Move the victim to a well-ventilated area with fresh air.
  - If mild symptoms (cough, nasal irritation) occur, rest and observe; symptoms usually subside without treatment.
  - If symptoms persist or worsen (chest tightness, difficulty breathing), seek medical attention and provide this MSDS.
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- In Case of Skin Contact:
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  - Immediately remove contaminated clothing, shoes, and accessories.
  - Rinse the affected area with plenty of running lukewarm water for 5-10 minutes.
  - Do not use alkaline or acidic neutralizers; mild soap can be used for cleaning.
  - If skin redness, itching, or rash occurs, apply a mild moisturizing cream and consult a doctor if irritation persists for more than 24 hours.
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- In Case of Eye Contact:
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  - Hold the eyelids open wide and rinse continuously with clean running water or sterile normal saline for 10-15 minutes.
  - Remove contact lenses if present and easy to do (do not delay rinsing to remove lenses).
  - Avoid rubbing the eyes; seek medical attention if irritation (redness, tearing, blurred vision) persists after rinsing.
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- If Swallowed:
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  - Do not induce vomiting (risk of aspiration of liquid into the respiratory tract).
  - Rinse the mouth thoroughly with water; give small sips of water if the victim is conscious and able to swallow.
  - Do not administer any neutralizing agents or food.
  - Seek medical attention immediately and bring this MSDS to the attending physician.
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- **4.2 Most Important Symptoms and Effects, Both Acute and Delayed**
  - Acute Effects: Mild skin/eye irritation; occasional mild gastrointestinal discomfort if swallowed (nausea, abdominal cramps).
  - Delayed Effects: No known delayed toxic effects; skin irritation, if any, resolves within 24-48 hours without long-term sequelae.
- **4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed**
  - No specific antidote is required; treat symptomatically.



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- Inform the physician of the product composition (polyepoxysuccinic acid aqueous solution) and exposure route.

#### 4.4 Notes to Physician

- Avoid unnecessary use of steroids or antihistamines unless symptoms are severe.
- For eye exposure, ophthalmological examination is recommended if blurred vision persists for more than 48 hours.

### SECTION 5: Firefighting Measures

#### 5.1 Extinguishing Media

- Suitable Extinguishing Media: Water spray, foam (AFFF), carbon dioxide (CO<sub>2</sub>), dry chemical powder, and inert gas.
- Unsuitable Extinguishing Media: No restrictions; all common firefighting agents are effective.

#### 5.2 Special Hazards Arising from the Substance or Mixture

- Non-combustible: The product is an aqueous solution (water content 60-70%) with no flash point, autoignition temperature, or flammable/explosive limits.
- Hazardous Combustion Products: No toxic or corrosive gases are generated during combustion; decomposition at temperatures above 300°C may produce trace amounts of carbon dioxide (CO<sub>2</sub>) and water vapor.
- No risk of explosion or fire propagation.

#### 5.3 Advice for Firefighters

- No special protective equipment is required for routine firefighting; wear standard fire-fighting gear (helmet, fire coat, gloves, boots).
- In case of large-scale fire involving adjacent hazardous materials, wear a self-contained breathing apparatus (SCBA) and full protective clothing.
- Cool storage containers with water spray from a safe distance to prevent deformation or leakage.
- Collect and contain fire-extinguishing runoff to avoid environmental contamination (though the product itself is biodegradable).

### SECTION 6: Accidental Release Measures

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

- Personal Precautions: Wear nitrile rubber gloves and safety glasses for small spills; for large spills, add a disposable apron and face shield.
- Evacuation: No need to evacuate unless the spill is massive (≥500 L) and causes slippery surfaces; isolate the spill area to prevent slips/falls.
- Ventilation: Ensure adequate ventilation in enclosed areas to disperse any mild vapors (negligible vapor pressure).

#### 6.2 Environmental Precautions

- Prevent spilled material from entering sewers, rivers, lakes, or groundwater systems.

- For outdoor spills, contain runoff with sandbags or absorbent booms; do not allow direct discharge into natural water bodies (though biodegradable, large quantities may temporarily alter water pH).
- For indoor spills, contain with absorbent materials to prevent spread to drains.

## 6.3 Methods and Materials for Containment and Cleaning Up

- Small Spill ( $\leq 50$  L):
  - Absorb with inert absorbent materials (diatomaceous earth, vermiculite, or universal absorbent pads).
  - Transfer the absorbed material to sealed plastic containers for disposal as non-hazardous waste (in compliance with local regulations).
  - Rinse the contaminated area with water and wipe dry.
- Large Spill ( $> 50$  L):
  - Construct temporary dikes with sand, soil, or absorbent materials to contain the spill.
  - Transfer the spilled liquid to corrosion-resistant tanks or containers using a portable pump.
  - Clean the remaining residue with absorbent materials and dispose of properly.
  - Neutralize the contaminated surface with a mild alkaline solution (e.g., 5% sodium bicarbonate) if necessary, then rinse with water.

## 6.4 Reference to Other Sections

- For waste disposal, refer to Section 13; for personal protection, refer to Section 8.

## SECTION 7: Handling and Storage

### 7.1 Precautions for Safe Handling

- General Handling:
  - Operate in a well-ventilated area; no special ventilation equipment is required for routine handling.
  - Avoid splashing during transfer or pouring; use funnels or transfer pumps with splash guards.
  - Do not mix with strong oxidizing agents (e.g., hydrogen peroxide, sodium hypochlorite) or concentrated strong acids/bases ( $\text{pH} < 2$  or  $\text{pH} > 12$ ) to prevent polymer degradation.
  - Use dedicated equipment (pipes, tanks, pumps) for handling; clean equipment with water after use.

### Hygiene Measures:

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- Wash hands thoroughly with soap and water after handling, before eating, drinking, smoking, or using the toilet.
- Do not touch the eyes, mouth, or face with contaminated hands.
- Remove and wash contaminated clothing before reuse; discard heavily contaminated clothing if cleaning is not effective.

## 7.2 Conditions for Safe Storage, Including Any Incompatibilities

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- Storage Conditions:
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- Store in a cool, dry, well-ventilated warehouse or storage area.
- Avoid direct sunlight and high temperatures; storage temperature should be between 5°C and 35°C (do not freeze, as freezing may affect product stability).
- Keep containers tightly closed when not in use to prevent contamination, evaporation, or absorption of moisture.
- Store on pallets to keep containers off the floor (minimum 10 cm) and away from walls (minimum 15 cm) for proper air circulation.

## Incompatibilities:

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- Strong oxidizing agents (e.g., H<sub>2</sub>O<sub>2</sub>, KMnO<sub>4</sub>, NaClO)
- Concentrated strong acids (e.g., HCl, H<sub>2</sub>SO<sub>4</sub>) and strong bases (e.g., NaOH, KOH)
- Heavy metal salts (e.g., lead nitrate, copper sulfate) at high concentrations

Storage Class (TRGS 510): 13 (Non-Hazardous Liquids)

Shelf Life: 18 months (unopened, under specified storage conditions); after opening, use within 6 months and keep tightly closed.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

Component	CAS-No.	Value	Control Parameters	Basis
Polyepoxysuccinic Acid	1528-98-7	No occupational exposure limits	TWA (Time-Weighted Average)	No national/international exposure standards (low-hazard polymer)
Deionized Water	7732-18-5	No occupational exposure limits	-	-

### 8.2 Exposure Controls

Engineering Controls:

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- General ventilation is sufficient for routine handling; local exhaust ventilation is recommended for large-scale mixing or transfer operations (to control mist).
- Use acid-resistant equipment (HDPE, PP, or stainless steel 304/316) for storage and transfer; avoid using carbon steel or aluminum.
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- Personal Protective Equipment (PPE):
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- Eye/Face Protection: Safety glasses with side shields (compliant with EN 166 or ANSI Z87.1) for routine handling; face shield for large-scale operations or when splashing is likely.
- Skin Protection: Nitrile rubber gloves (minimum thickness 0.15 mm, breakthrough time  $\geq 480$  min) or neoprene gloves; disposable apron or acid-resistant protective clothing for large-scale handling.
- Respiratory Protection: Not required under normal handling conditions; disposable dust/mist mask (EN 149 FFP1 or NIOSH N95) is recommended if mist is generated during mixing or spraying.
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- Hygiene Measures:
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- Provide hand-washing facilities near the workplace with soap, water, and disposable towels.
- Do not eat, drink, smoke, or store food in the handling or storage area.
- Conduct regular health checks for employees with long-term exposure (annual routine physical examination).

### **SECTION 9: Physical and Chemical Properties**

#### 9.1 Information on Basic Physical and Chemical Properties

- a) Physical State: Liquid
- b) Color: Colorless to pale yellow
- c) Odor: Mild, odorless to slightly acidic odor
- d) Melting Point/Freezing Point:  $\leq 0^{\circ}\text{C}$  (aqueous solution freezes at  $\sim -2^{\circ}\text{C}$ )
- e) Initial Boiling Point and Boiling Range:  $100-105^{\circ}\text{C}$  (water evaporation; polymer decomposes above  $300^{\circ}\text{C}$ )
- f) Flammability (Liquid/Gas): Non-flammable
- g) Upper/Lower Flammability or Explosive Limits: Not applicable
- h) Flash Point:  $> 100^{\circ}\text{C}$  (Closed Cup; no flash point for aqueous solutions)
- i) Autoignition Temperature:  $> 350^{\circ}\text{C}$  (polymer decomposition temperature)
- j) Decomposition Temperature:  $> 300^{\circ}\text{C}$  (decomposes into  $\text{CO}_2$  and water vapor)
- k) pH Value (1% Aqueous Solution,  $25^{\circ}\text{C}$ ): 4.0-6.0
- l) Viscosity ( $25^{\circ}\text{C}$ ): 50-300 mPa·s (2% aqueous solution)
- m) Water Solubility: Fully miscible with water (any ratio)

- n) Partition Coefficient (n-octanol/water, log P): < -2.0 (highly hydrophilic)
- o) Vapor Pressure (25°C): < 0.5 hPa (equivalent to water vapor pressure)
- p) Density (25°C): 1.10-1.18 g/cm<sup>3</sup>
- q) Relative Vapor Density (air = 1): > 1 (slightly heavier than air, negligible vapor)
- r) Particle Characteristics: Not applicable (liquid)
- s) Explosive Properties: Not explosive
- t) Oxidizing Properties: None
- u) Corrosivity: Non-corrosive to carbon steel, stainless steel, HDPE, PP, and glass

## 9.2 Other Safety Information

- No additional safety-related physical/chemical data; product stability is not affected by humidity or normal atmospheric conditions.

## SECTION 10: Stability and Reactivity

### 10.1 Chemical Stability:

- Stable under normal storage and handling conditions (temperature 5-35°C, sealed containers, away from incompatible substances).
- No polymerization risk under recommended conditions; does not undergo self-polymerization or cross-linking.

### 10.2 Possibility of Hazardous Reactions:

- No hazardous reactions occur under normal use and storage conditions.
- Reactions with strong oxidizing agents (e.g., concentrated H<sub>2</sub>O<sub>2</sub>) may cause mild exotherm and polymer degradation, but no toxic or explosive products are formed.

### 10.3 Conditions to Avoid:

- Freezing ( $\leq 0^{\circ}\text{C}$ )
- High temperatures ( $> 35^{\circ}\text{C}$ )
- Direct sunlight (prolonged exposure may reduce product efficacy)
- Contact with incompatible substances (strong oxidizing agents, concentrated acids/bases)

### 10.4 Incompatible Materials:

- Strong oxidizing agents: Hydrogen peroxide ( $\geq 30\%$ ), sodium hypochlorite ( $\geq 10\%$ ), potassium permanganate.
- Concentrated strong acids: Hydrochloric acid ( $\geq 37\%$ ), sulfuric acid ( $\geq 98\%$ ).
- Concentrated strong bases: Sodium hydroxide ( $\geq 40\%$ ), potassium hydroxide ( $\geq 40\%$ ).
- Heavy metal salts: Lead nitrate, copper sulfate, mercury chloride (high concentrations may cause precipitation).

### 10.5 Hazardous Decomposition Products:

- At temperatures above 300°C: Carbon dioxide (CO<sub>2</sub>), water vapor (H<sub>2</sub>O), and trace amounts of succinic acid monomers (non-toxic).
- No toxic, corrosive, or explosive decomposition products under normal conditions.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects

- Acute Toxicity:

- - Oral (Rat, LD<sub>50</sub>): > 10,000 mg/kg (undiluted product) – practically non-toxic.
  - Dermal (Rabbit, LD<sub>50</sub>): > 20,000 mg/kg (undiluted product) – practically non-toxic.
  - Inhalation (Rat, LC<sub>50</sub>): > 50 mg/m<sup>3</sup> (4-hour exposure to mist) – no acute inhalation toxicity.
  - Eye Irritation (Rabbit): Mild irritation (reversible within 24 hours) – GHS Category 3.
  - Skin Irritation (Rabbit): Mild irritation (erythema, no edema; reversible within 48 hours) – GHS Category 3.

- Skin Sensitization (Guinea Pig Maximization Test): Negative – no sensitizing effect.

- Germ Cell Mutagenicity (Ames Test, Chromosome Aberration Test): Negative – no mutagenic activity.

- Carcinogenicity: Not classified as carcinogenic by IARC, EPA, NTP, or EU CLP.

- Reproductive Toxicity (Rat, Oral Reproductive Toxicity Test): No adverse effects on fertility, pregnancy, or fetal development at doses up to 5000 mg/kg/day.

- Specific Target Organ Toxicity (Single Exposure): No target organ toxicity identified.

- Specific Target Organ Toxicity (Repeated Exposure, 90-day Rat Oral Study): No adverse effects on liver, kidney, spleen, or other organs at doses up to 3000 mg/kg/day.

- Aspiration Hazard: Low (liquid, low viscosity; no risk of aspiration pneumonia if swallowed).

### 11.2 Additional Information

- The toxicological properties have been fully evaluated; the product is considered safe for industrial use when handled in accordance with this MSDS.
- No cumulative toxicity or bioaccumulation potential; rapidly metabolized and excreted in animals.

## SECTION 12: Ecological Information

### 12.1 Toxicity to Aquatic Organisms:

- Fish (Zebrafish, LC<sub>50</sub>, 96h): > 5000 mg/L (undiluted product) – practically non-toxic.
- Daphnia magna (EC<sub>50</sub>, 48h): > 1000 mg/L – practically non-toxic.
- Green Algae (Scenedesmus obliquus, EC<sub>50</sub>, 72h): > 5000 mg/L – practically non-toxic.
- Aquatic Invertebrates (Chironomus tentans, LC<sub>50</sub>, 96h): > 5000 mg/L – practically non-toxic.

### 12.2 Persistence and Degradability:

- Biodegradability (OECD 301B Ready Biodegradability Test): Biodegradation rate > 70% in 28 days – fully biodegradable.
- No persistent organic pollutant (POP) characteristics; does not accumulate in the environment.

### 12.3 Bioaccumulative Potential:

- Bioconcentration Factor (BCF, Fish): < 10 – no bioaccumulation potential.
- Does not bind to soil or sediment; rapidly degraded in aquatic and terrestrial environments.

### 12.4 Mobility in Soil:

- Low mobility; binds weakly to soil organic matter and clay particles.
- No leaching potential to groundwater (biodegradable before reaching groundwater).

### 12.5 Results of PBT and vPvB Assessment:

- Not classified as PBT (Persistent, Bioaccumulative, Toxic) or vPvB (very Persistent, very Bioaccumulative) under EU REACH regulations.

### 12.6 Endocrine Disrupting Properties:

- OECD 440/441 Endocrine Disruption Tests: Negative – no estrogenic, androgenic, or anti-androgenic activity.

### 12.7 Other Adverse Effects:

- No adverse effects on soil microorganisms, plants, or terrestrial animals at recommended use concentrations.
- Contributes to environmental protection by reducing phosphorus discharge (phosphorus-free formulation) and preventing eutrophication.

## SECTION 13: Disposal Considerations

### 13.1 Waste Treatment Methods

- Product Waste:
  - Classified as non-hazardous waste (in compliance with EU Waste Framework Directive 2008/98/EC and Chinese National Hazardous Waste List).
  - Small quantities (≤50 L) can be diluted with water (1:100) and discharged to municipal wastewater treatment systems (after confirming compliance with local discharge standards).
  - Large quantities should be disposed of through licensed non-hazardous waste treatment facilities; incineration or landfill is acceptable (incineration produces only CO<sub>2</sub> and water).
  - Do not discharge directly into natural water bodies without treatment (even though biodegradable, large quantities may alter water pH).

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- Packaging Waste:

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- Rinse empty containers thoroughly with water to remove residual product (rinsate can be added to the product for use or disposed of as product waste).
- Dispose of rinsed containers as non-hazardous recyclable waste (HDPE drums, IBC totes) or municipal solid waste.
- Do not reuse containers for food, drink, or other non-industrial purposes.

#### 13.2 Disposal Considerations for Contaminated Packaging:

- If containers are heavily contaminated and cannot be rinsed, dispose of as non-hazardous waste (same as product waste) or contact the supplier for specialized disposal.

#### 13.3 Relevant Regulations:

- Comply with local, national, and international waste disposal regulations (e.g., EU REACH, US RCRA, Chinese Waste Management Law).
- Obtain necessary permits for large-scale waste disposal; keep disposal records for at least 3 years.

## SECTION 14: Transport Information

### 14.1 UN Number:

- ADR/RID: - (Not dangerous goods)
- IMDG: - (Not dangerous goods)
- IATA-DGR: - (Not dangerous goods)

### 14.2 UN Proper Shipping Name:

- ADR/RID: Non-dangerous goods (Polyepoxysuccinic Acid aqueous solution)
- IMDG: Non-dangerous goods (Polyepoxysuccinic Acid aqueous solution)
- IATA-DGR: Non-dangerous goods (Polyepoxysuccinic Acid aqueous solution)

### 14.3 Transport Hazard Class(es):

- ADR/RID: -
- IMDG: -
- IATA-DGR: -

### 14.4 Packaging Group:

- ADR/RID: -
- IMDG: -
- IATA-DGR: -

### 14.5 Environmental Hazards:

- IMDG Marine Pollutant: No
- ADR/RID: No
- IATA-DGR: No

### 14.6 Special Precautions for User:



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- Transport by ordinary cargo vehicles (road, rail, sea, air) – no special transport equipment required.
- Secure containers during transport to prevent collision, tipping, or leakage (use pallets and strapping).
- Avoid direct sunlight and high temperatures during transport; transport temperature should be between 0°C and 40°C (protect from freezing and overheating).
- Do not transport with incompatible substances (strong oxidizing agents, concentrated acids/bases) in the same shipment.
- For sea transport, store in the cargo hold (not on deck) to avoid exposure to extreme temperatures and weather.

### 14.7 Incompatible Materials for Transport:

- Strong oxidizing agents, concentrated strong acids, concentrated strong bases, and heavy metal salts.

### 14.8 Additional Transport Information:

- No dangerous goods documentation required (e.g., dangerous goods declaration, MSDS for transport); standard commercial invoices and packing lists are sufficient.
- Compliance with IMDG Code, ADR/RID, and IATA-DGR regulations for non-dangerous goods.

## SECTION 15: Regulatory Information

### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

- National Regulations (China):
  - Hazardous Chemical Safety Management Regulation (2011) – Classified as non-hazardous chemical.
  - Water Pollution Prevention and Control Law (2017) – Compliant with discharge standards.
  - Environmental Protection Law (2014) – Fully biodegradable, meets environmental requirements.
  - GB/T 22627-2014 "Polyepoxysuccinic Acid (PESA) for Water Treatment" – Complies with product quality standards.

### International Regulations:

- GHS Classification (Rev. 9): Skin Irrit. 3; Eye Irrit. 3 (Low Hazard).
- EU REACH (Registration, Evaluation, Authorization and Restriction of Chemicals):
  - Not listed in SVHC Candidate List (as of 2026).
  - No registration required for volumes <1000 tons/year (polymer exemption).
- US TSCA (Toxic Substances Control Act): Listed on the TSCA Inventory (CAS 1528-98-7).
- EU CLP (Classification, Labeling and Packaging of Substances and Mixtures): Complies with CLP labeling requirements (WARNING, H316, H320).

- FDA (US Food and Drug Administration): Compliant for use in indirect food contact applications (water treatment for food processing facilities).

### 15.2 Other Regulations:

- Comply with local workplace safety regulations (e.g., OSHA in the US, HSE in the UK).
- Comply with water treatment chemical use regulations in the target country (e.g., EU Drinking Water Directive 98/83/EC).

### SECTION 16: Other Information

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#### Further Information:

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- This MSDS is based on current scientific knowledge and complies with GB/T 16483, GB/T 17519, GHS Rev. 9, IMDG Code, ADR/RID, and IATA-DGR standards.
- The information provided is accurate and reliable as of the revision date, but no warranty is given for its completeness or applicability to specific use conditions.
- The supplier is not liable for damage caused by improper use, storage, or handling of the product.
- Users are responsible for ensuring compliance with local regulations and conducting compatibility tests before use.

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