









Safety Data Sheet



24 hour Emergency Response No. **+86-532-8027466**

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION											
IR-PESA (40%)		Shandong IRO Water Treatment Co.,Ltd Mushi Town, Tengzhou, Zaozhuang, China CN: +86-0532-66888207 Int: +86-0532- 85028486									
PRODUCT USE: Water Treatment Application Formulation IRO phone: +86-532-8027466											
Personal Protection Equipment	GHS Pictograph	DOT Symbol(s)	HMIS (See last page for guide to HMIS)								
 Safety Glasses  Gloves  Protective Apron		IMO/IMDG Class : 8 UN 3267 Pack Grp : III DOT Label: Corrosive	<table border="1"> <tr> <td>HEALTH</td> <td>3</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td>C</td> </tr> </table>	HEALTH	3	FLAMMABILITY	0	PHYSICAL HAZARD	0	PERSONAL PROTECTION	C
HEALTH	3										
FLAMMABILITY	0										
PHYSICAL HAZARD	0										
PERSONAL PROTECTION	C										

SECTION 2: HAZARDS IDENTIFICATION	
EMERGENCY OVERVIEW	
WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT; BURNS IN RESPIRATORY TRACT AND MUCOUS MEMBRANE. HARMFUL IF SWALLOWED OR INHALED.	
GHS CLASSIFICATION Signal Word Warning:   IRRIANT CORROSIVE TO METALS GHS Hazard Statements H303: May be harmful if swallowed. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H335: May cause respiratory irritation.	Prevention Precautionary Statements P234: Keep only in original container. P260: Do not breathe. P264: Wash hands thoroughly after handling. P280: Wear protective gloves/eye protection/face protection. P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Response Precautionary Statements P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501: Dispose of contents/container through a waste management company authorized by the local government.
RESPONSE: See section 4: FIRST AID MEASURES. Also, see below: <ul style="list-style-type: none"> Do not handle until all safety precautions have been read and understood. Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact) Wash hands or liquid-contacted skin thoroughly after handling. Do not eat, drink or smoke when using this product. 	
STORAGE: Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers.	
DISPOSAL: Dispose of contents/containers to approved disposal site in accordance with regulations.	



Safety Data Sheet

24 hour Emergency Response No. +86-532-8027466



SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS		
COMPONENT	CAS No.	WEIGHT %
Polyepoxysuccinic acid (2,3-Oxiranedicarboxylic acid homopolymer)	51274-37-4	90%
Water	7732-18-5	Balance

SECTION 4: FIRST-AID MEASURES
<p>Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. In case of respiratory arrest, apply artificial respiration. Immediately get medical attention.</p> <p>Skin Contact: Remove contaminated clothing, jewelry and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15 – 20 minutes). Get medical attention, if needed.</p> <p>Eye Contact: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.</p> <p>Ingestion: Never make an unconscious person vomit or drink fluids. Give water or milk. If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.</p>

SECTION 5: FIRE-FIGHTING MEASURES
<p>Fire And Explosion Hazard: Solution not combustible.</p> <p>Extinguishing Media: Regular dry chemical, carbon dioxide, water, and regular foam.</p> <p>Large fires: Use regular foam or flood with fine water spray.</p> <p>Fire Fighting: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Use extinguishing agents appropriate for surrounding fire.</p>

SECTION 6: ACCIDENTAL RELEASE MEASURES
<p>Occupational Spill: Do not touch spilled material. Stop leak if possible without personal risk.</p> <p>Small Spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.</p> <p>Small Dry Spills: Move containers away from spill to a safe area.</p> <p>Large Spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry.</p>

SECTION 7: HANDLING AND STORAGE
<p>Handling: Do not get into eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.</p> <p>Storage: Store in cool, dry, well ventilated area above 0°C. Product is stable under normal conditions of handling and storage.</p> <p>Suitable Materials Of Construction: PVC, polypropylene, glass reinforced plastic, and polyethylene.</p>



Safety Data Sheet



24 hour Emergency Response No. +86-532-8027466

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT (PPE)

General: Contains no substances with occupational exposure limit values.

Exposure limit(s): Exposure limits are listed below, if they exist.

Exposure Limits: No occupational exposure limits established.

Ventilation: Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

Eye Protection: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Clothing: Wear appropriate chemical resistant clothing.

Protective Material Types: Rubber

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Clear, amber color
Odor:	Odorless
Specific gravity:	1.26-1.28
pH :	Approx. 12 @ 1%
Water solubility:	Complete
Thermal Decomposition:	230°C
Formula:	(C ₄ H ₄ O ₅) _x

NOTE: the physical data above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: May be corrosive to metals

Conditions To Avoid: Avoid heat, flames, sparks and other sources of ignition. Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.

Incompatibilities: metals, reducing agents, oxidizing materials.

Amines: Incompatible

Metals: May be corrosive in the presence of moisture

Metal salts of sulfides: May release toxic gases

- **Oxidizers:** Fire and explosion hazard.
- **Sulfites:** May release toxic gases

Hazardous Decomposition: Thermal decomposition products: carbon monoxide and carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

ACUTE TOXICITY:

LD50 Rat, oral (PESA): > 5000 mg/kg

LD50 Rabbit, dermal (PESA): > 5000 mg/kg

LD50 Rat, oral (maleic acid): 708 mg/kg

LD50 Mouse, dermal (maleic acid): 1560 mg/kg



Safety Data Sheet



24 hour Emergency Response No. +86-532-8027466

Toxicological effects: Acute toxicity (oral): Based on available data, classification criteria is not met.
Acute toxicity (dermal): Based on available data, the classification criteria are not met.
Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
Skin corrosion/irritation, eye damage/irritation: Skin Corr. 1B; H314 = Causes severe skin burns and eye damage.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitization: Skin Sens. 1B; H317 = May cause an allergic skin reaction.
Germ cell mutagenicity/Genotoxicity: Lack of data.
Carcinogenicity: Lack of data.
Reproductive toxicity: Lack of data.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.
Specific target organ toxicity (repeated exposure): Lack of data.
Aspiration hazard: Lack of data.
Other information: So far, no carcinogenous, mutagenous or teratogenic effects of this product have been observed. See information supplied by the manufacturer: If swallowed, may cause irritation to the mucous membranes. (Burns of the oral cavity, oesophagus, and the gastrointestinal tract.)

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY:-

Toxicity: Aquatic toxicity: Harmful effects by modification of pH-value.
Persistence and degradability: Further details: Product is biodegradable.
Bioaccumulative potential: Partition coefficient: n-octanol/water: no data available
Mobility in soil: No data available
Results of PBT and vPvB assessment: No data available
Other adverse effects: General information: Do not allow to penetrate into soil, waterbodies or drains.

SECTION 13: DISPOSAL

Environmental precautions: CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.
Disposal/Waste Classification: When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: UN 3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(Polyepoxysuccinic acid (PESA))
DOT Class: 8
DOT ID Number: UN 3267
DOT Pack Group: III
DOT Label: Corrosive:
IMO UN Number: 3267



Safety Data Sheet



24 hour Emergency Response No. +86-532-8027466



NFPA Hazard Rating:

Health: 3 (Serious)

Fire: 0 (Minimal)

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations.

SECTION 15: REGULATORY INFORMATION

The following statutes, regulations and standards have the related prescribes on chemicals in terms of safe use, storage, transportation, loading and unloading, classification and symbol S, etc.

- Provisions on the Environmental Administration of New Chemical Substances.
- The Regulation on Chemicals Safe Use at Working Site
- Law on Prevention and Control of Environmental Pollution Caused by Solid Waste.
- Occupational Exposure Limits for Hazardous Agent in The workshop Chemical Hazardous Agents (GBZ 2.1).

TSCA Status: Y

TSCA 12(b) export notification: Not listed

CERCLA Section 103 (40 CFR 302.4): N

SARA Section 302 (40 CFR 355.30): N TPQ

SARA Section 304 (40 CFR 355.40): N RQ

SARA Section 313 (40 CFR 372.65): N

California Prop 65 Status: N

SARA Acute Hazard: Y

SARA Chronic Hazard: N

SARA Fire Hazard: N

SARA Reactivity Hazard: N

SARA Sudden Release Hazard: N

WHMIS Classification: N

INTERNATIONAL REGULATIONS:

EU Risk and Safety Phrases:

R: 22-36-38 Harmful if swallowed. Irritating to eyes. Irritating to skin

S: 2-13-24-25-26-36-46

China. Inventory of Existing Chemical Substances in China (IECSC):

All intentional components are listed on the inventory, are exempt, or are supplier certified



Safety Data Sheet

24 hour Emergency Response No. **+86-532-8027466**



SECTION 16: OTHER INFORMATION

Further information: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Information Source and References: This SDS is prepared by IRO Specialty Chem. USA, Inc. from information supplied by internal references within our company

Shandong IRO Water Treatment Co. Ltd., Shandong Province, China: Urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

Regulatory requirements: These are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer, specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us (<https://www.irowater.com>) for the most current version.

Date of production of SDS: 10/18/2015:

Author: CFrayne

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM					
HAZARD INDEX			PERSONAL PROTECTION INDEX		
4 = SEVERE HAZARD	An asterisk(*) or other designation corresponds to additional information on a data sheet or separate chronic effects notification		A		
3 = SERIOUS HAZARD			B		
2 = MODERATE HAZARD			C		
1 = SLIGHT HAZARD			D		
0 = MINIMAL HAZARD	Additional Information		E		
PERSONAL PROTECTION EQUIPMENT			F		
A	n	o	p	G	
q	r	s	t	H	
u	w	y	z	I	
 Safety Glasses	 Splash Goggles	 Face Shield & Eye Protection	 Gloves	 Respirator	 Earplugs
 Boots	 Synthetic Apron	 Full Suit	 Full Face Respirator	 Earplugs	 Earplugs
 Hearing Muffs	 Chemical & Vapor Respirator	 Full Face Respirator	 Hearing Hood or Mask	 Respirator	 Boots
X Consult your supervisor or S.O.P. for "SPECIAL" handling directions					