






# Safety Data Sheet

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



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION			
<b>IR-ATMP (Na<sub>x</sub>)</b>		Shandong IRO Water Treatment Co.,Ltd Mushi Town, Tengzhou, Zaozhuang, China IRO phone: +86-532-8027466	
PRODUCT USE: Water Treatment Application Formulation			
Personal Protection Equipment	GHS Pictograph	DOT Symbol(s)	HMIS (See last page for guide to HMIS)
		DOT Proper Shipping Name: Not regulated as a hazardous material.	<b>HEALTH</b> 1
			<b>FLAMMABILITY</b> 0
			<b>PHYSICAL HAZARD</b> 1
			<b>PERSONAL PROTECTION</b> B

SECTION 2: HAZARDS IDENTIFICATION		
EMERGENCY OVERVIEW		
<b>GHS CLASSIFICATION</b> <b>Signal Word Warning:</b> <b>DANGER</b>  <b>IRRITANT</b>	<b>Hazard Statements</b> H303: May be harmful if swallowed H317: May cause an allergic skin reaction H320: Causes eye irritation	<b>Prevention Precautionary Statements</b> P102: Keep out of reach of children. P233: Keep container tightly closed. P262: Do not get in eyes, on skin or on clothing. P264: Wash thoroughly after handling. P281: Use personal protective equipment as required
<b>GHS RESPONSE</b> Precautionary Statements: See section 4: FIRST AID MEASURES. Also, see below: <ul style="list-style-type: none"> <li>• <b>P202:</b> Do not handle until all safety precautions have been read and understood.</li> <li>• <b>P270:</b> Do not eat, drink or smoke when using this product.</li> </ul> <b>P 280:</b> Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact Wash hands or liquid-contacted skin thoroughly after handling.		
<b>STORAGE:</b> Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers.		
<b>DISPOSAL:</b> Dispose of contents/containers to approved disposal site in accordance with local, regional, and/or international regulations.		

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS		
COMPONENT	CAS No.	WEIGHT %
Amino Trimethylenephosphonic acid, sodium salt (variable) ATMP (Na <sub>x</sub> )	20592-85-2	29.4-32.4%
Water	7732-18-5	Balance



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Note: where x = 0, CAS = 6419-19-8, where x = 1 (Mol wt = 321), where x = 2: CAS = 4105-01-5 (Mol wt 343), where X = 3: CAS = 7611-50-9 (Mol wt 365), where x = 4: CAS = 94021-23-5 (Mol wt 4090, where x = 5: CAS = 2235-43-0, where x = 6: CAS = 15505-05-2 (Mol wt 431)

## SECTION 4: FIRST-AID MEASURES

**Inhalation:** When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

**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.

**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.

**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.

## SECTION 5: FIRE-FIGHTING MEASURES

**Fire And Explosion Hazard:** Non flammable aqueous solution

**Extinguishing Media:** Regular dry chemical, carbon dioxide, water, and regular foam.

**Large fires:** Use regular foam or flood with fine water spray.

**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. Do not get water directly on material.

**Large Fires:** Flood with fine water spray. Reduce vapors with water spray. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Occupational Spill:** Do not touch spilled material. Stop leak if possible without personal risk.

**Small Spills:** Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

**Small Dry Spills:** Move containers away from spill to a safe area.

**Large Spills:** Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry.

## SECTION 7: HANDLING AND STORAGE

**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.

**Storage:** Store in cool, dry, well ventilated area above 0oC. Product is stable under normal conditions of handling and storage.



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Emptied containers retain vapor and product residue. Observe all recommended safety precautions until container is cleaned, reconditioned, or destroyed. The reuse of this material's container for non-industrial purposes is prohibited and any reuse must be in consideration of the data provided in this material safety data sheet.

**Suitable Materials Of Construction:** Glass lining, PVC, polypropylene, glass reinforced plastic, and polyethylene.

**Unsuitable Materials Of Construction:** Mild steel, carbon steel, aluminum, and other metals.

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

**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

**Respirator:** Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any dust, mist and fume respirator. Any air-purifying respirator with a high-efficiency particulate filter. Any powered, air purifying respirator with a dust, mist and fume filter. Any powered, air-purifying respirator with a high-efficiency particulate filter.

**For unknown concentrations or immediately dangerous to life or health:** Any supplied-air respirator with full face-piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply, or any self-contained breathing apparatus with a full face-piece.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Clear, colorless to light yellow
<b>Odor:</b>	Characteristic
<b>Melting point:</b>	< 34°F, < 1°C
<b>Specific gravity:</b>	1.27 - 1.30
<b>pH : 7</b>	9-12 for 1% solution, pH varies with Na content
<b>Vapor Pressure:</b>	23.8 @ 77°F

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

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Keep containers and surrounding areas well ventilated.



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**Incompatibilities:** strong oxidising agents.

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Oxides of phosphorus and other phosphorus compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerization:** Will not occur.

## SECTION 11: TOXICOLOGICAL INFORMATION

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

### Toxicity Data:

**Oral:** LD50 , rat , > 5,000 mg/kg , Practically nontoxic following oral administration.

**Dermal:** LD50 , rabbit , > 5,000 mg/kg , Practically nontoxic after skin application in animal studies.

### HEALTH EFFECTS:-

#### INHALATION:

**Acute Exposure:** Aqueous solutions have been reported to be corrosive to all mucous membranes.

**Chronic Exposure:** No data available.

**Skin Contact:** Acute Exposure: Aqueous solutions may cause burning and itching.

**Chronic Exposure:** Repeated or prolonged exposure to irritants may cause dermatitis.

**Eye Contact:** Acute Exposure: Aqueous solutions may cause burning and itching.

**Chronic Exposure:** Repeated or prolonged exposure to irritants may cause conjunctivitis.

**Ingestion:** Acute Exposure: Aqueous solutions have been reported to be corrosive to all mucous membranes.

**Chronic Exposure:** Administration of 50, 150 or 500 mg/kg/day for 24 months resulted in reduced body weights and changes in liver, spleen and kidney weights or weight ratios in the high dose group. The no-effect level was considered to be 150 mg/kg/day.

## SECTION 12: ECOLOGICAL INFORMATION

### ENVIRONMENTAL TOXICITY:-

**Invertebrates:** 48 h, EC50 Water flea (*Daphnia magna*) 265 mg/l

**Fish:** 48h, LC50 Rainbow trout (*Oncorhynchus mykiss*) >3440 mg/l

**Algae:** 72 h, EC50 Algae (*Selenastrum capricornutum*) >140mg/l

**Biodegradation:** Not available

### ENVIRONMENTAL FATE:-

**Persistence and degradability:** The total of the organic components contained in the product is not classified as "readily biodegradable" (OECD-301 A-F). However, this product is expected to be inherently biodegradable.

**Bio-accumulative potential:** There is no evidence to suggest bioaccumulation will occur.

**Mobility in soil:** Accidental spillage may lead to penetration in the soil and groundwater. However, there



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is no evidence that this would cause adverse ecological effects.

**Other adverse effects:** Do not empty into drains. Not readily biodegradable

## 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. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

## SECTION 14: TRANSPORT INFORMATION

This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

## SECTION 15: REGULATORY INFORMATION

We are unable to verify that all of the ingredients in this product are compliant with NICNAS regulations. There are several possible reasons why this may occur. If you have any reason to be concerned about this, we suggest you call us on the number above.

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312

- Yes  No Chronic (delayed) Health Hazard
- Yes  No Fire Hazard
- Yes  No Sudden Release of Pressure Hazard
- Yes  No Reactive Hazard

Regulatory information provided in this SDS was prepared for this product and is to be used only for the product in its present form, If this material is used as a component in another material or altered in any way, the information in this SDS may no longer be applicable. This document was generated for the purpose of distributing health, safety and environmental data.

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

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

## 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



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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: 7/06/2015:**

**Author: CFrayne**

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM				
<b>HAZARD INDEX</b>		An asterisk(*) or other designation corresponds to additional information on a data sheet or separate chronic effects notification Additional Information		
4 = SEVERE HAZARD				
3 = SERIOUS HAZARD				
2 = MODERATE HAZARD				
1 = SLIGHT HAZARD				
0 = MINIMAL HAZARD				
PERSONAL PROTECTION EQUIPMENT				
<b>A</b>	<b>n</b>	<b>o</b>	<b>p</b>	
<b>q</b>	<b>r</b>	<b>s</b>	<b>t</b>	
<b>u</b>	<b>w</b>	<b>y</b>	<b>z</b>	
HAZARD INDEX		PERSONAL PROTECTION INDEX		
<b>A</b>		<b>A</b>		
<b>B</b>		<b>B</b>		
<b>C</b>		<b>C</b>		
<b>D</b>		<b>D</b>		
<b>E</b>		<b>E</b>		
<b>F</b>		<b>F</b>		
<b>G</b>		<b>G</b>		
<b>H</b>		<b>H</b>		
<b>I</b>		<b>I</b>		
<b>J</b>		<b>J</b>		
<b>K</b>		<b>K</b>		
<b>X</b>	Consult your supervisor or S.O.P. for "SPECIAL" handling directions			