

**SAFETY DATA SHEET**

APPLIED MEMBRANES, INC.  
 2450 Business park Dr.  
 Vista, CA 92081-8847

IDENTITY <b>AS-102</b>
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**Section I Company and Product Identification**

 <p>APPLIED MEMBRANES, INC.                  2450 Business park Dr.                  Vista, CA 92081-8847</p>	ChemTel phone Number: In the U.S.: 1-800-255-3924 International: 1-813-248-0585 Australia: 1-300-954-583 Brazil: 0-800-591-6042 China: 400-120-0751 India: 000-800-100-4086 Mexico: 01-800-099-0731
	Date Prepared: March, 1999

Trade Name	AS-102
Product Family	RO, NF Scale Inhibitor

**Section II – Hazards Identification**

Signal Word : <b>WARNING</b>  <b>Acute Toxicity: Oral, Category 5 Concentrated product may be harmful if swallowed.</b> <b>Skin Corrosion/Irritation, May be slightly irritating to skin.</b> <b>Serious eye Irritation: Category 2</b>	
<b>GHS Hazard Phrases</b>	May be harmful if swallowed or in contact with skin. Causes serious eye Irritation.
<b>GHS Precaution Phrases</b>	Read label before use. Wear protective gloves/ eye protection/ face protection.
<b>GHS Response Phrases</b>	Call a poison center/doctor/...if you feel unwell
<b>GHS Storage and Disposal Phrases</b>	Please refer to section 7 for storage and section 13 for Disposal information

<b>Route(s) of Entry:</b>	<b>Inhalation?</b> No	<b>Skin?</b> No	<b>Ingestion?</b> Yes
<b>Health Hazards (Effects of Acute and Chronic Overexposure)</b>			
<b>Inhalation:</b> None Known			
<b>Eye Contact:</b> Irritation, redness, watering eyes, itchiness			

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<b>Skin Contact:</b> Irritation.
<b>Ingestion (Swallowing):</b> Nauseous

## Section III - Hazard Ingredients/Composition Information

Hazardous Components (Chemical Name)	CAS #	%	EC #
Water	7732-18-5	50-80	N/A
Blend of Organophosphonates	Proprietary	> 10%	N/A
Blend of Dispersants	Proprietary	> 10%	N/A

## Section IV – First Aid Procedures

<b>Inhalation:</b> Immediately remove to fresh air. Get medical attention if nasal, throat or lung irritation develops.
<b>Eye Contact:</b> Remove contact lenses. Hold eyelids apart. Immediately flush with plenty of low pressure water for at least 15 minutes. Call a physician. Remove material from skin and clothing.
<b>Skin Contact:</b> Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Thoroughly wash before reuse or discard. Wash skin with soap and water until clean. Get medical help if irritation occurs.
<b>Ingestion (Swallowing):</b> If conscious, immediately give several glasses of water or milk. Do not induce vomiting. (Do not give food to an unconscious person). Take immediately to hospital or physician.

MOST IMPORTANT SYMPTOMS	
<b>Symptoms/Injuries</b>	Irritation, redness, itchiness
<b>Symptoms/Injuries after eye contact</b>	Irritation, redness, watering eyes, itchiness
<b>Symptoms/Injuries after ingestion</b>	Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

## Section V - Fire Fighting Measures

<b>Flash Point (Method Used)</b> None	<b>Flammable Limits:</b> NE
<b>Extinguishing Media:</b> Water spray, foam, dry chemical, or carbon dioxide	
<b>Auto ignition temp:</b> Noncombustible.	
<b>Special Fire Fighting Procedures and Protective Equipment:</b> Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.	
<b>Unusual Fire and Explosion Hazard:</b> Decomposes in a fire giving off irritant fumes.	
<b>Hazardous Decomposition or Combustion Byproducts:</b> Elemental oxides.	

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**Section VI – Accidental Release Measures**

**Steps to Be Taken in Case Material is Released or Spilled:**  
 Steps to Be Taken in Case Material is Released or Spilled: Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.  
**Additional Information:** Planning ahead is essential for handling spills. Proper equipment and trained employees should be readily available to correct a spill situation. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers and public waters. Avoid release to the environment.

**Section VII - Handling and Storage**

<b>Precautions to Be taken in Handling (General):</b>	Use appropriate protective wear. 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.
<b>Precautions for safe storage and any incompatibilities</b>	Keep container closed when not in use. Protect from freezing. Do not store in elevated temperatures.

**Section VIII – Exposure Controls and Personal Protection**

Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	TWA ACGIH	STEL ACGIH	Other Limits Recommended
None has been established	None	None	None	NA

**Primary Route of Exposure:** Body contact.  
**Target Organs:** None Known  
**Respiratory Protection:** Approved NIOSH respirator.  
**Skin Protection:** Rubber or plastic-impervious and/or waterproof.  
**Protective Gloves:** Rubber, nitrile, neoprene, PVL. **Eye Protection:** Splash proof safety goggles.  
**Other Protective Clothing or Equipment:** Eye wash facility and safety shower in immediate area. Rubber boots. Rubbers over leather shoes are not recommended.

**Section IX - Physical/Chemical Characteristics**

<b>Boiling Point:</b> > 100°C ( 212°F)	<b>Percent Volatile:</b> NE
<b>Viscosity :</b> (Brookfield) NE	<b>Specific Gravity</b> (H2O = 1): 1.10 ± 0.05
<b>Solubility in Water:</b> Complete	<b>pH:</b> 3 – 4
<b>Appearance and Odor:</b> Clear colorless to yellow liquid with characteristic odor.	

NR: NOT REQUIRED, NE: NOT ESTABLISHED, NA: NOT APPLICABLE

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### Section X – Stability & Reactivity Data

<b>Stability:</b> Stable under normal conditions.
<b>Conditions to avoid:</b> Do not expose to extreme temperatures.
<b>Incompatibility (Materials to Avoid):</b> May react with strong oxidizers
<b>Hazardous Decomposition Products:</b> None known
<b>Hazardous Polymerization:</b> Does not occur
<b>Condition to avoid:</b> None known
<b>Additional Information:</b> none

### Section XI– Toxicological Information

<b>Available data on closely related material indicates the following:</b> ORAL LD50(Rats): >2,400 mg/kg (Estimated value) DERMAL LD50(Rabbits): >7,940 mg/kg (Estimated value) EYE IRRITATION: Not established SKIN IRRITATION: Not established
<b>Mutagenic:</b> Not listed.
<b>Teratogenic:</b> Not listed.
<b>Reproductive Toxicity:</b> Not listed.
<b>Primary Route of Exposure:</b> Body contact.
<b>Target Organs:</b> Not Listed

### Section XII – Ecological Information

<b>Available data on closely related material indicates the following:</b> Aquatic Toxicity: Daphnia Magna 48 Hr. acute toxicity LC50=2700 mg/L, no effect level = 1540 mg/L Fathead Minnow 96 Hr. acute toxicity, no effect level = 5000 mg/L Biodegradation: BOD-28 = 1 mg/g BOD-5 = 1 mg/g COD = 116 mg/g TOC = 26 mg/g
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### Section XIII - Disposal Consideration

<b>Waste Disposal Method:</b> Waste Disposal Method: Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharge under a permit. Product as is- Incinerate or land dispose in an approved land fill. If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is not applicable. The state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.
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**Section XIV - Transport information**

D.O.T. Proper Shipping Name: N/A	D.O.T. Hazard Class: N/A D.O.T. LABEL: N/A
ID No: N/A	Packing Group: N/A

**Section XV - Regulatory information**

Workplace Classification: This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR1 910.1200).  
 This product is not a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).  
 SARA TITLE III: Section 311/312 Categorizations (40CFR370): This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.  
 SARA TITLE III: Section 313 information (40CFR372): This product does not contain a chemical which is listed in section 313 at or above de minimum concentrations.  
 CERCLA Information (40CFR302.4): Releases of this material to air, land or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.  
 US. Toxic Substances Control Act (TSCA): All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.  
 Australian Inventory of Chemical Substances: All components of this product are listed in the Australian Inventory of Chemical Substances (AICS).

**Section XVI - Other information**

**NFPA RATINGS:**

Health	Flammability	Reactivity
1	0	0

The data contained in this safety data sheet has been prepared based upon an evaluation of the ingredients contained in the product, their concentrations in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required.