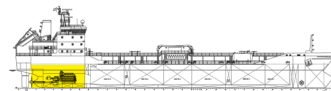


OSMO ANTISCAL 1

(FLOCON100)



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FOR TREATMENT OF REVERSE OSMOSIS DRINKING WATER SYSTEMS AND DESALINATION PLANTS TOTALLY BIODEGRADABLE AND NON-TOXIC

PHYSICAL DATA

Colour: light yellow fluid
Viscosity: 15 Cps
Weight: 1.15 kg per litre
pH: 2.5-4
Freezing Point: 0° to - 5° C
The product can be diluted with water



for use in REVERSE OSMOSIS PLANTS
FOR DRINKING WATER PRODUCTION

DESCRIPTION

Polymer based liquid product designed to inhibit scaling in REVERSE OSMOSIS drinking water systems.

Extremely effective against CALCIUM CARBONATE, CALCIUM SULPHATE, BARIUM SULPHATE and STRONTIUM SULPHATE SCALING. NON-CORROSIVE, SAFE TO USE AND INEXPENSIVE because it is used in low dosage.

Stable in water solution and effective in a wide pH and temperature range. No adhesion to CELLULOSE and SPIRAL POLYAMIDE membranes. Contains no phosphates, therefore no sewage water pollution. Scale producing carbonates and SULPHATES are kept in a solution above their usual solubility.

ADVANTAGES

- Extremely effective against CALCIUM CARBONATE, CALCIUM SULPHATE, BARIUM SULPHATE AND STRONTIUM SULPHATE even when applied in low dosages.
- Liquid, easy to handle, non-toxic and non-corrosive.
- Stable product, no difficult mixing is required before use. For use in a wide pH and TEMPERATURE range.

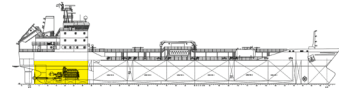
DOSAGES

ANTISCAL 1 has proved to be much more effective than SODIUM-HEXAMETAPHOSPHATES or commercial PHOSPHATES. This means that the membranes of REVERSE OSMOSIS SYSTEMS are better protected against SULPHATE and carbonate clogging even during system malfunctioning or power failure. The product dosage depends on salinity. As a general rule, the following dosages are recommended:

- SEA WATER: 10 PPM (10 grams every ton of sucked water)
- BRACKISH WATER: 5 PPM (5 grams every ton of sucked water)

OSMO ANTISCAL 1

(FLOCON100)



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IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, THIS INFORMATION IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU DO A TEST TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION FURNISHED BY URRUTY GG NIEGO SRL HEREUNDER ARE GIVEN GRATIS, AND URRUTY GG NIEGO SRL ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

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FLOCON[®] 100 (AS-100)

Material Safety Data Sheet

Issue Date: 10/25/02 Revision Date: 8/25/05 Supersedes: 10/18/99

MSDS Ref. No: 9003-01-4
Date Approved: 10/18/1999
Version: US/Canada
Revision No: 3

1. Chemical Product and Company Identification

Product Name:	Flocon [®] 100
SYNONYM(s):	Poly (Acrylic) Acid; 2-Propenoic Acid, Homopolymer
General Use:	Scale/ deposit control additive
Emergency Telephone Numbers:	For Chemical Emergency, Spill Leak Fire Exposure or Accident - Call CHEMTREC Day or Night DOMESTIC NORTH AMERICA 800-424-9300 INTERNATIONAL, CALL 703-527-3887 (collect calls accepted)

2. Composition/ Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt.%</u>
Polyacrylic Acid	9003-01-4	20-50

3. Hazards Identification

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Burning product will release carbon monoxide and carbon dioxide.

POTENTIAL HEALTH EFFECTS: Product is irritating to eyes and skin.

4. First Aid Measures

EYES:	Flush with cool running water. Remove contact lenses and flush again for 10-15 minutes.
SKIN:	Flush skin with water; wash with soap and water.
INGESTION:	Rinse mouth; then drink 1 or 2 large glasses of water. DO NOT induce vomiting. NEVER give anything by mouth to an unconscious person.
INHALATION:	Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR

Product has low oral, dermal and inhalation toxicity and is mildly irritating to eyes and skin. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. Fire Fighting Measures

Flash Point and Method:	Not applicable
Flammable Limits:	Not applicable
Auto-ignition Temperature:	Not applicable
Extinguishing Media:	Not applicable
Fire/ Explosion Hazards:	Decomposition and combustion products may be toxic.
Fire Fighting Procedures:	Use method appropriate for surrounding fire.
Sensitivity to Static Discharge	Not applicable
Sensitivity to Impact	Not applicable
Hazardous Decomposition Products	Thermal decomposition and burning may produce carbon monoxide and carbon dioxide.

6. Accidental Release Measures

RELEASE NOTES:

Isolate area. Wear prescribed protective clothing and equipment. Dike or dam large spills. Pump to containers or soak up on inert absorbent. Flush residue or small spills to sanitary sewer. Waste Disposal: Consults state/ local authority for limits on chemical waste disposal.

7. Handling and Storage

HANDLING:

When handling use personal protection equipment indicated in the "exposure Controls/ Personal Protection" section to protect personnel from exposure.

STORAGE:

Store in closed containers and protect from physical damage.

COMMENTS:

VENTILATION: Use with general room ventilation or local exhaust when airborne contamination is expected.

8. Exposure Controls/ Personal Protection

ENGINEERING CONTROLS:

Use appropriate ventilation and/or personal protective equipment indicated below to protect employees from contact.

PERSONAL PROTECTIVE EQUIPMENT

Eyes and Face:	Use chemical-type goggles or face shield.
Respiratory:	Use MSHA/NIOSH approved dust/mist respiratory protection when airborne mist is expected.
Protective Clothing:	Use impervious gloves. Wear impervious apron and gauntlets when splashing is expected during liquid

transfers. Wear normal work-shoes except in conditions of spills where rubber overshoes or boots would be required.

9. Physical and Chemical Properties

Odor:	Faint, bland
Appearance:	Pale yellow to light brown viscous liquid
pH:	3.0-4.0 (at 100%)
Percent Volatile:	Not available
Vapor Pressure:	24 mm Hg @ 25°C (water)
Vapor Density:	(Air = 1): 0.020 @ 25 °C
Initial Boiling Point:	212°F/ 100°C
Freezing Point:	< 0°C
Solubility in Water:	Mixes with water in all proportions
Evaporation Rate:	(Butyl Acetate = 1): Equivalent to water
Density:	Not available
Specific Gravity:	1.175 @ 68 °F/ 20 °C
Coeff. Oil/Water:	Not available
Odor Threshold:	Not available
Oxidizing Properties:	Not available

10. Stability and Reactivity

Conditions to Avoid:	Oxidizing agents
Stability:	Stable under normal conditions of use and handling.
Polymerization:	Will not occur
Hazardous Decomposition Products:	Thermal decomposition and burning may produce carbon monoxide and carbon dioxide.
Incompatible Materials	Strong oxidizing agents; avoid mixing with strong hypochlorite solution, except at low concentrations and alkaline pH, to prevent releases of chlorine gas.

11. Toxicological Information

Eye Effects:	Mild irritant (rabbit)
Skin Effects:	Mild irritant (rabbit)
Dermal LD50:	>2000 mg/kg (rabbit)
Oral LD50:	>5000 mg/kg (rat)
Inhalation LC50:	>200 mg/L1 hr (rat)
Sensitization:	(Skin) Non-sensitizer (guinea pig) (Study Number: 198-2266)
Acute Effects from Overexposure:	Product has low oral, dermal and inhalation toxicity. Product is irritating to the eyes and skin, and was non-sensitizing to the skin.
Chronic Effects from Overexposure:	No data available for the product.

Carcinogenity	Not listed
IARC:	
NTP:	Not listed
OSHA:	Not listed
Other:	ACGIH: Not listed

12. Ecological Information

ECOLOGICAL INFORMATION:

No data available for the product.

CHEMICAL FATE INFORMATION:

No data available for the product

13. Disposal Considerations

DISPOSAL METHOD:

Open dumping or burning of this material is prohibited. An acceptable method of disposal is to burn in an incinerator in accordance with all local, state and federal environmental laws, rules, standards and regulations. The appropriate regulatory agencies should be contacted prior to disposal.

If the product was supplied in a single use container, care should be taken to dispose of the container in a responsible manner and in accordance with applicable regulations. Label precautions should be followed for any residual material in the container. Whenever possible, our company encourages recycling of containers.

14. Transport Information

U.S. DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME:	Not regulated
PRIMARY HAZARD	Not applicable
CLASS/DIVISION:	
UN/NA NUMBER:	None
PACKING GROUP:	III
PLACARDS:	Not applicable
LABEL:	Not applicable
Dot Marking:	Not required
Hazardous Substances RQ:	Not applicable
49 STCC Number:	Not applicable

SPECIAL SHIPPING NOTES:

IMRG:	Not regulated
IATA:	Not regulated
PROPER SHIPPING NAME:	Corrosive liquids, N.O.S. (contains acrylic acid polymer)
PRIMARY IDENTIFICATION	UN1760

NUMBER:	
PRIMARY CLASSIFICATION:	8 (Corrosive)
SUBSIDIARY CLASSIFICATION:	9.2
PACKING GROUP:	III

Keep container tightly closed. Do not freeze. Protect against physical damage.

15. Regulatory Information

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENT AND REAUTHORIZATION ACT)

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40CFR 355): Not listed

SECTION 311 HAZARD CATEGORY (40 CFR 370): Not applicable

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370): Not applicable.

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): Not listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)
CERCLA REGULATORY (40 CFR 302.4): Not listed

TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA STATUS (40 CFR 710): Listed (components)

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

Product Identification:	Not available
Hazard Classification:	Not applicable
Ingredients Disclosure List:	Not applicable
Domestic Substances list:	Listed

16. Other Information

REVISION SUMMARY

This MSDS replaces Revision #2, dated November 20, 1998. Changes in information are as follows:

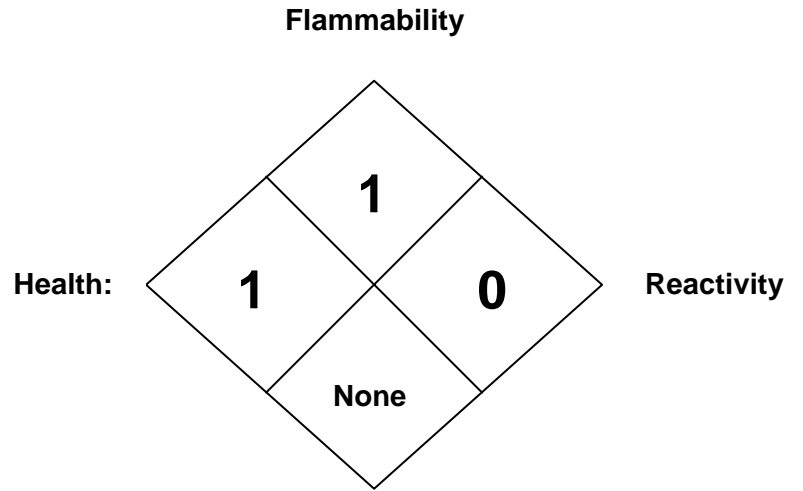
Section 1: Manufacturer Information

HMIS Rating

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
PROTECTION	H

Key

- 4= Severe
- 3= Serious
- 2= Moderate
- 1= Slight
- 0= Minimal



SPECIAL HMIS RATINGS NOTES:

Protection = H (Safety goggles, gloves, apron and a vapor respirator)

The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard and Canada's workplace Hazardous information system (WHMIS).

National Fire Protection Association (NFPA)
Hazardous Materials Identification system (HMIS)