

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name** MICROLOX SPECIAL 50 LF

**Other means of identification**

**Product Code** 181  
**UN/ID No.** UN3264  
**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Acid Cleaner for RO/UF Membrane Systems.  
**Uses advised against** PREVENT DISPERSION OF MISTS!

**Manufacturer Address**

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

**Emergency telephone number**

Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Classification**

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**

Harmful if inhaled  
 Causes severe skin burns and eye damage  
 May be corrosive to metals



**Appearance** aqueous solution

**Physical state** liquid

**Odor** None

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Keep only in original container  
 Use only in well-ventilated areas  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see Section 4 on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up

Store in a corrosive resistant container.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other Information**

- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Nitric acid	7697-37-2	25	
Phosphoric acid	7664-38-2	12	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures****Eye contact**

Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.

**Skin Contact**

Flush with water for 15 minutes. Get medical attention. Remove contaminated clothing and wash before reuse.

**Inhalation**

Remove victim from immediate source of exposure to fresh air. If breathing is difficult, administer oxygen if available. If victim is not breathing, administer CPR. If individual experiences nausea, headache, or dizziness, get immediate medical attention.

**Ingestion**

Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person.

**Most important symptoms and effects, both acute and delayed****Symptoms**

Corrosive. Causes tissue destruction, permanent damage to the cornea, blindness. Causes irritation (possibly severe), burns to the skin. Mists may cause lung irritation, shortness of breath, fluid in lungs. Ingestion causes nausea, vomiting, diarrhea, corrosion, burns to mouth and esophagus, abdominal pain, chest pain, shortness of breath, seizures, death.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** None known.

### **Specific hazards arising from the chemical**

If the stock solution container breaks, the solution should be handled with care as it is corrosive. May produce poisonous or irritating gas or fumes. This material is reactive with many materials.

### **Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### **Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool fire exposed containers.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Evacuate nonessential personnel. Ventilate area. Wear appropriate personal protection equipment. Remove all sources of ignition.
<b>Environmental precautions</b>	See Section 12 for additional ecological information.
<b>Methods for containment</b>	Stop leak if you can do it without risk. Completely contain spilled material with dikes or sand bags, etc.
<b>Methods for cleaning up</b>	Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water and neutralized. Flush spill area with water. Neutralization products, both solid and liquid, must be recovered for disposal.

## 7. HANDLING AND STORAGE

### **Precautions for safe handling**

**Advice on safe handling** Do not get in eyes, on skin, or clothing. Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation.

### **Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	. Keep containers tightly closed and properly labeled. This product reacts violently with bases liberating heat and causes spattering. Store in a cool, dry, well-ventilated area. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored.
<b>Incompatible materials</b>	Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur tioxide, and phosphorus petoxide. Reacts explosively with metallic powders, hydrogen sulfide, carbides, chlorates, fulminates, nitrates, picrates., cyanides, sulfides, and turpentine. Increases the the flammability of combustible, organic and readily oxidizable materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nitric acid 7697-37-2	STEL: 4 ppm TWA: 2 ppm	TWA: 2 ppm TWA: 5 mg/m <sup>3</sup> (vacated) TWA: 2 ppm (vacated) TWA: 5 mg/m <sup>3</sup> (vacated) STEL: 4 ppm (vacated) STEL: 10 mg/m <sup>3</sup>	IDLH: 25 ppm TWA: 2 ppm TWA: 5 mg/m <sup>3</sup> STEL: 4 ppm STEL: 10 mg/m <sup>3</sup>
Phosphoric acid 7664-38-2	STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup> (vacated) STEL: 3 mg/m <sup>3</sup>	IDLH: 1000 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>

**Appropriate engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

- Eye/face protection**      Wear protective splash proof safety goggles. Additional full face protection is recommended if splashing is a possibility.
- Skin and body protection**      Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection**      If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**      Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	None
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	No information available
<b>Color</b>	clear colorless		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH	1.6	1% Solution	
Melting point/freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	No information available		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific Gravity	1.224		
Water solubility	Soluble in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		

<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

High temperatures might lead to formation of nitrogen dioxide. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product.

**Incompatible materials**

Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur trioxide, and phosphorus pentoxide. Reacts explosively with metallic powders, hydrogen sulfide, carbides, chlorates, fulminates, nitrates, picrates, cyanides, sulfides, and turpentine. Increases the flammability of combustible, organic and readily oxidizable materials.

**Hazardous Decomposition Products**

Nitrogen oxides (NOx). Phosphorus oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Product Information</b>	No data available
<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye contact</b>	Risk of serious damage to eyes.
<b>Skin Contact</b>	Contact causes severe skin irritation and possible burns.
<b>Ingestion</b>	Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric acid 7697-37-2	-	-	= 67 ppm ( Rat ) 4 h
Phosphoric acid 7664-38-2	= 1530 mg/kg ( Rat )	= 2730 mg/kg ( Rabbit )	> 850 mg/m <sup>3</sup> ( Rat ) 1 h

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.  
**Germ cell mutagenicity** No information available.  
**Carcinogenicity** No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Nitric acid 7697-37-2	-	Group 2A	-	X

**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)** 12750 mg/kg  
**ATEmix (dermal)** 22750 mg/kg  
**ATEmix (inhalation-dust/mist)** 1.8 mg/l  
**ATEmix (inhalation-vapor)** 268 mg/l

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Nitric acid 7697-37-2	-	72: 96 h <i>Gambusia affinis</i> mg/L LC50	-
Phosphoric acid 7664-38-2	-	3 - 3.5: 96 h <i>Gambusia affinis</i> mg/L LC50	4.6: 12 h <i>Daphnia magna</i> mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

Chemical Name	Partition coefficient
Nitric acid 7697-37-2	-2.3

**Other adverse effects** No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container.

Chemical Name	California Hazardous Waste Status
Nitric acid 7697-37-2	Toxic Corrosive Ignitable
Phosphoric acid 7664-38-2	Corrosive

**14. TRANSPORT INFORMATION**

<b>DOT</b>	Regulated
<b>UN/ID No.</b>	UN3264
<b>Proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s.
<b>Hazardous ingredients</b>	(nitric acid/phosphoric acid)
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

**15. REGULATORY INFORMATION**

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**Legend:**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical which is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Percent by Weight
Nitric acid - 7697-37-2	25.0%

**SARA 311/312 Hazards**

- Corrosive to metal**
- Acute toxicity (any route of exposure)**
- Serious eye damage or eye irritation**
- Skin corrosion or irritation**

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nitric acid 7697-37-2	1000 lb	-	-	X
Phosphoric acid 7664-38-2	5000 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Nitric acid 7697-37-2	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Phosphoric acid 7664-38-2	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Nitric acid 7697-37-2	X	X	X
Phosphoric acid 7664-38-2	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not Applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	Health hazards 3	Flammability 0	Instability 1	Physical and Chemical Properties - Personal protection X
<b>HMIS</b>	Health hazards 3	Flammability 0	Physical hazards 1	

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Updated Section 15

**Disclaimer**

The information provided in this Material 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 a 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.

**End of Safety Data Sheet**