

Membrane Acid 200

SAFETY DATA SHEET

Preparation Date: 30-Jul-2008

Revision Date: 28-May-2015

Revision Number: 2

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

Product Identifier

Product Name Membrane Acid 200

Other means of identification

Item#: 1867

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Blended Nitric and Phosphoric Acid cleaner for RO/UF Filtration Equipment, Restricted to professional users

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier DeLaval Cleaning Solutions
11100 N. Congress Ave.
Kansas City, MO 64153

Tel: 816-891-7700, 8am – 5pm M-F

Emergency Telephone Number

Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Gases)	Category 2
Skin Corrosion/Irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1B

Sulfuric acid and other mineral acids mist statement

The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric or other strong mineral acids (such as Hydrochloric and Nitric acid) as a known human carcinogen, (IARC category 1). This classification applies only to mists containing such mineral acids and not to the specific acids or their solutions, unless otherwise noted.

Corrosive to metals	Category 1
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Label Elements

Emergency Overview

DANGER

Hazard Statements

Fatal if inhaled
Causes severe skin burns and eye damage
May cause cancer
May be corrosive to metals

Inhalation	Move to fresh air.
Ingestion	Do not induce vomiting. Drink 1 or 2 glasses of water. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects	According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

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

Unsuitable Extinguishing Media

No information available.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes.

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.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Soak up with inert absorbent material. DO NOT use combustible materials such as sawdust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Precautions for Safe Handling**

Handling	Avoid contact with skin, eyes and clothing.
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Conditions for safe storage, including any incompatibilities

Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.
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Incompatible Materials	bases, organic materials, light metals, bleach
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Keep out of the reach of children

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nitric acid	TWA: 2 ppm	TWA: 2 ppm	25 ppm

7697-37-2	STEL: 4 ppm	TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³	
Phosphoric acid 7664-38-2	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³	1000 mg/m ³

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection	Goggles.
Skin and body protection	Wear protective gloves and protective clothing.
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

Physical state	Liquid	Odor	No information available
Appearance	Clear Colorless	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>
pH	2	
Melting point/freezing point	No information available	
Boiling Point/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	1.28	
Water Solubility	soluble	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition Temperature	No information available	
Decomposition temperature	No information available	
Viscosity of Product	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	10.6 lb/gal
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Gives off hydrogen by reaction with some metals (e.g. aluminum). Contact with combustible material may cause fire.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible Materials

bases, organic materials, light metals, bleach

Hazardous decomposition products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin contact	No data available.
Ingestion	No data available.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nitric acid 7697-37-2	-	-	= 67 ppm (Rat) 4 h = 130 mg/m ³ (Rat) 4 h
Phosphoric acid 7664-38-2	= 1530 mg/kg (Rat)	2730 mg/kg (Rabbit)	850 mg/m ³ (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.

Mutagenic effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

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

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Reproductive Effects 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

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
 The following values are calculated based on chapter 3.1 of the GHS document .

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	Microtox	Waterflea
Nitric acid 7697-37-2	-	72: 96 h Gambusia affinis mg/L LC50	-	-
Phosphoric acid 7664-38-2	-	3 - 3.5: 96 h Gambusia affinis mg/L LC50	-	4.6: 12 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

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

Waste Disposal Method Dispose of in accordance with local regulations. Should not be released into the environment.

Contaminated Packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT

UN-No 3264
Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s (Nitric Acid, Phosphoric acid)
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA	TSCA
DSL/NDSL	DSL/NDSL
EINECS/ELINCS	Complies
ENCS	Does not Comply
CHINA	Complies
KECL	Complies

PICCS Complies
AICS Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
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

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
Chemical Name	RQ	CERCLA EHS RQs		RQ
Nitric acid 7697-37-2	1000	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Phosphoric acid 7664-38-2	5000	-		RQ 5000 lb final RQ RQ 2270 kg final RQ

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label information

EPA Pesticide registration number Not applicable

16. OTHER INFORMATION

NFPA Health 3 Flammability 0 Instability 1 Physical Hazard -

Preparation Date: 30-Jul-2008
Revision Date: 28-May-2015

Revision Note
 No information available

Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS