

Membrane Acid 100

SAFETY DATA SHEET

Preparation Date: 16-Jul-2008

Revision Date: 05-Dec-2019

Revision Number: 5

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

Product Identifier

Product Name Membrane Acid 100

Other means of identification

Item#: 1866

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use PHOSPHATE-FREE ACID CLEANER FOR RO/UF MEMBRANES AND STAINLESS STEEL FOOD PROCESSING EQUIPMENT, Restricted to professional users

Uses advised against All other

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

**Appearance** Clear Colorless**Physical state** Liquid**Odor** No information available**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear respiratory protection
 Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

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.

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
Nitric acid	7697-37-2	36

If a concentration range is shown, the exact concentration has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first-aid measures

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.
Ingestion	Do not induce vomiting. Drink 1 or 2 glasses of water. Call a physician or Poison Control Center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

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

No information available.

Specific hazards arising from the chemical

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

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.

NFPA **Health hazards** 3 **Flammability** 0 **Instability** 1

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.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Incompatible Materials bases, organic materials, light metals (e.g. aluminum, copper, brass, zinc galvanized), bleach

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Only constituents with exposure limits are listed. Any constituent not listed has no known exposure limit.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH

Nitric acid 7697-37-2	TWA: 2 ppm STEL: 4 ppm	TWA: 2 ppm TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³	25 ppm
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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** In case of inadequate ventilation wear respiratory protection.

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

<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	1.22	
Water Solubility	soluble	
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	

Other information

Liquid Density 10.2 lb/gal

10. STABILITY AND REACTIVITY

Reactivity

May react with other chemicals. Do not mix with other chemicals except as directed on label.

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 (e.g. aluminum, copper, brass, zinc galvanized), bleach

Hazardous decomposition products

None known.

11. TOXICOLOGICAL INFORMATION

Principal Routes of Exposure Eye contact, Skin contact, Ingestion

Information on likely routes of exposure

Eyes Corrosive to the eyes and may cause severe damage including blindness.
Skin Extremely corrosive and destructive to tissue.
Ingestion Ingestion causes burns of the upper digestive and respiratory tracts.

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

Sensitization Product is not identified as a sensitizer according to OSHA regulations.
Mutagenic effects Product is not identified as a mutagen according to OSHA regulations.
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	Not Listed	Group 1 Group 2A	Not Listed	Not Listed

Legend:

IARC (*International Agency for Research on Cancer*)
 Group 1 - *Carcinogenic to Humans*
 Group 2A - *Probably Carcinogenic to Humans*

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.

Reproductive Effects Product is not identified as having reproductive effects according to OSHA regulations.
STOT - single exposure Product is not identified as having single target organ toxicity (single exposure) according to OSHA regulations.

STOT - repeated exposure Product is not identified as having single target organ toxicity (repeated exposure) according to OSHA regulations.

Aspiration Hazard Product is not identified as an aspiration hazard according to OSHA regulations.

Numerical measures of toxicity

If available, toxicity values of individual components are shown below.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nitric acid 7697-37-2	No data available	No data available	= 130 mg/m ³ (Rat) 4 h = 2500 ppm (Rat) 1 h

0% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

If available, ecotoxicity values of individual components are shown below.

Chemical name	Algae/aquatic plants	Fish	Microtox	Waterflea
Nitric acid 7697-37-2	No data available	72: 96 h Gambusia affinis mg/L LC50	No data available	No data available

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

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 2031
Proper Shipping Name Nitric Acid Solution
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 (SARA) - Section 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Nitric acid (CAS# 7697-37-2)

State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nitric acid 7697-37-2	X	X	X

U.S. EPA Label information

EPA Pesticide registration number Not applicable

16. OTHER INFORMATION

Preparation Date: 16-Jul-2008
Revision Date: 05-Dec-2019
Revision Note: None

Disclaimer

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 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 SDS