

SAFETY DATA SHEET

1. Identification

Product Name: Lavaso[™] 2

Synonyms: N/A

Product Use: Reverse Osmosis Membrane Cleaner

Manufacturer/Supplier: Professional Water Technologies

Address: 1048 La Mirada Court, Vista California, 92081, USA

Telephone: 760-639-4400

E-mail: info@pwtchemicals.com

Transportation Emergency Number:

CHEMTREC: 800-424-9300 (Domestic North America) OR 703-527-3887 (International, collect calls accepted)

2. Hazard Identification

Classification:

Health	Environmental	Physical
Dermal Acute Toxicity – Category 4 Skin Corrosive – Category 1B Eye Corrosive – Category 1 STOT-SE – Category 3	Acute Aquatic – Category 3	Corrosive to Metals – Category 1

Pictograms:



Hazard Statements

DANGER

Causes serious eye damage
 Cause severe skin burns and eye damage
 May cause respiratory irritation; or
 May cause drowsiness or dizziness
 May be corrosive to metals

Precautionary Statements

Wear protective gloves, clothing and eye/face protection.
 Do not breathe dust, spray or vapors.
 If on skin: Remove/Take off immediately all contaminated clothing.
 Rinse skin with water/shower
 If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
 If swallowed: Rinse mouth. Do NOT induce vomiting.
 If inhaled: Remove person to fresh air and keep comfortable for breathing
 If inhaled: Call poison center or physician if you feel unwell.

Wash exposed areas thoroughly after handling.
Do not eat, drink or smoke when using this product.
Specific treatment see Section 4 (First aid measures)
Store container tightly closed in cool/well-ventilated place.
Immediately call a poison center or physician.
Wash contaminated clothing before reuse.
Store locked up.
Keep only in original container
Absorb spillage to prevent material damage.
Store in a corrosive resistant HDPE/PE/PP container with a resistant inner liner.
Dispose of contents/container in accordance with local/state/federal regulations.

3. Composition / Information on Ingredients

The specific chemical identities and exact percentages of composition have been withheld as a trade secret.

See Section 8 for Exposure Limits.

4. First Aid Measures

Eye: Eye irritation. Flush immediately with large amounts of water for at least 30 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

Skin: Itching or irritation of the skin. Immediately flush the skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Do not remove clothing if it sticks to skin. Use alkaline soap if available. Wash contaminated clothing before reuse.

Inhalation: For nasal irritation, remove exposed person from source of exposure to fresh air. If not breathing, clear airway and start cardiopulmonary resuscitation (CPR). Get immediate medical attention.

Ingestion: Do NOT induce vomiting. Give large quantities of milk and water. Never give anything by mouth to an unconscious person. Call a physician immediately.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use media appropriate to primary cause of fire. Use water to cool fire-exposed containers, structures and to protect personnel. Use water to dilute spills and to flush them away from sources of ignition.

Fire Fighting Procedures: Use water spray to cool containers exposed to fire. Minimize exposure. Do not breathe fumes. Contain run-off. A respirator that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements should be worn if conditions warrant the use of a respirator.

Unusual Fire and Explosion Hazards: None known

Combustion Products: Will emit toxic gases and form corrosive vapors and potassium oxides upon thermal decomposition.

6. Accidental Release Measures

Personal Protective Equipment: Protective clothing including chemical splash goggles, Latex, nitrile, or butyl rubber full-length gloves, rubber apron made of nitrile or butyl rubber, and rubber overshoes must be worn during spill clean-ups and deactivation of material. If this material comes into contact with the skin during clean-up operations, immediately remove all contaminated clothing and wash exposed skin with soap and water. See section 4, First Aid Measures, for further information.

Land Spill: Wearing recommended protective clothing and equipment, dike spill with soil, sand, or compatible commercial absorbent. Remove remaining liquid with a pump, vacuum truck, or absorb liquid in sand or commercial absorbent. Place waste in approved containers for disposal. Dispose waste according to Federal, State, and local regulations.

Water Spill: Wear protective clothing and equipment. Stop flow. Dike contaminated water and remove for disposal and/or treatment. Notify proper authorities and all downstream users if possible. Dispose of Solid Waste according to Federal, State, and Local Regulations.

7. Handling and Storage

Handling: Do not get in eyes, on skin or on clothing. Do not breathe dust or mists. Keep container closed. Use only with adequate ventilation. Use good hygiene practices. Wash hands before eating, drinking or smoking. Remove contaminated clothing and clean before re-use.

Storage Conditions: Store in tightly closed containers in cool, dry, well-ventilated area away from incompatibles. The maximum storage temperature for this material is 55°C/131°F. The minimum storage temperature for this material is 0°C/32°F. Do not store this material in containers made of steel.

8. Exposure Controls / Personal Protection

Exposure limits

Component	OSHA PEL (TWA)	Cal-OSHA (8-hour, TWA, STEL, ceiling)	ACGIH TLV
Triethanolamine			TWA - 5 mg/m ³
Potassium Hydroxide			2 mg/m ³

Engineering Controls: Use local exhaust ventilation at the point of dust or mist evolution. Have safety shower and eye wash station available where exposure can occur.

Personal Protective Equipment (PPE)

Respiratory Protection: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator use. Use air purifying respirators within use limitations associated with the equipment or else use supplied air-respirators. If air-purifying respirator use is appropriate, use a respirator with organic/acid gas cartridge and dust/mist prefilters. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air supplied respirator. Warning air purifying respirators do not protect workers in oxygen deficient atmospheres.

Eye Protection: Splash goggles and/or face shield (ANSI Z87.1 or approved equivalent).

Skin Protection: Wear impervious protective clothing. Use butyl (or Teflon for limited contact) gloves, boots, and coveralls. Remove gloves after use. Wash hands with soap and water.

9. Physical and Chemical Properties

Appearance: pale yellow

Odor: None

Density: Approximately 9 lbs./gallon

Specific Gravity: 1.00 – 1.10

Percentage Volatile: 70-72% Water - Max

Evaporation Rate: Same as water

pH (2% Solution): 10.20 – 11.20

Water Solubility: Complete

Boiling Point: 100°C (212°F)

Melting/Freezing Point: 0°C (32°F)

Vapor Pressure: 17mm Hg @ 20°C (68°F)

Vapor Density: Same as air

Auto-ignition Temperature: N/A

Flash point: N/A

Flammability: N/A

Flammable Limits:

LEL (Lower Explosive Limits): N/A

UEL (Upper Explosive Limits): N/A

10. Stability and Reactivity

Stability/Incompatibility: Incompatible with strong acids. Stable under normal storage conditions; see Section 7 (Handling and Storage) for specific conditions.

Hazardous Reactions/Decomposition Products: Will emit toxic gases and form corrosive vapors and potassium oxides upon thermal decomposition.

11. Toxicological Information

Acute Toxicity Information
<u>Lavasol 2</u> Oral (LD50) Rat – 13,950 mg/kg Dermal (LD50) Rabbit – 6,660 mg/kg

Signs and Symptoms of Overexposure: Eye and nasal irritation, headache, dizziness, nausea, vomiting, difficulty breathing, weakness, itching or burning of the skin.

Acute Affects: Harmful if swallowed.

Eye Contact: May cause serious or permanent eye damage.

Skin Contact: May cause severe burns and/or reddening.

Inhalation: May cause severe respiratory irritation.

Ingestion: May cause burns to the gastric/intestinal mucosa.

Chronic Effects: None known

Medical Conditions Aggravated by Exposure: May aggravate conditions of the lungs

12. Ecological Information

LC50 (Fathead Minnow) = 10,600 mg/L / 96hr

EC50 (Water flea (Daphnia magna) = 1,390 mg/L/48hr

Bioaccumulation potential has not been examined. Avoid release into environment.

13. Disposal Considerations:

Dispose of in accordance with Federal, State, and Local regulations and permits. Refer to state and local requirements for any additional requirements, as these may be different from Federal laws and regulations. Chemical additions, processing, or otherwise altering this material may make management information presented in the SDS incomplete, inaccurate or otherwise inappropriate.

14. Transportation Information

U.S. Department of Transportation (DOT), International Maritime Organization (IMDG), and International Air Transport Association (IATA)

Proper Shipping Name: Corrosive liquid, Basic, Inorganic, N.O.S. (Potassium Hydroxide)

Hazard Class: 8

Hazardous Ingredients: Potassium Hydroxide

UN/NA Number: 3266

Packing Group: II

Labels Required: Corrosive liquid

15. Regulatory Information

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA)

Lavaso 2 has a reportable quantity of 1,000 (lbs). If appropriate, immediately report to the National Response Center (800/424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies.

Toxic Substances Control Act (TSCA): All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Clean Water Act (CWA): LavasoTM 2 is not a hazardous substance under the Clean Water Act. Consult Federal, State and local regulations for specific requirements.

Clean Air Act (CAA): LavasoTM 2 is not a hazardous substance under the Clean Air Act. Consult Federal, State and local regulations for specific requirements.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 313 Notification (40CFR 372)

This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

State Regulations

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts Right To Know Components: Triethanolamine – CAS # 102-71-6

Pennsylvania Right To Know Components: Triethanolamine – CAS # 102-71-6

International Regulations

Canadian Environmental Protection Act: All of the components of this product are included on the Canadian Domestic Substances list (DSL).

Canadian Workplace Hazardous Materials Information System (WHMIS):



E=Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

European Inventory of Existing Chemicals (EINECS): All of the components of this product are included on EINECS.

EU Classification:

EU Risk (R) and Safety (S) Phrases:

R34: Causes burns.

R36/37/38: Irritating to eyes, respiratory system and skin.

R41: Risk of serious damage to eyes.

R65: Harmful - may cause lung damage if swallowed.

S9: Keep container in a well-ventilated place.

S24/25: Avoid contact with skin and eyes.

S27/28: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (Section 4)

S53: Avoid exposure - obtain special instructions before use.

S57: Use appropriate container to avoid environmental contamination.

16. Other Information

Revision Date: September 10, 2018

Disclaimer: This SDS is provided as an information resource only. This document should not be taken as a warranty for which Professional Water Technologies assumes legal responsibility. The information contained within this SDS was provided by raw materials and other reliable sources. The buyer assumes all responsibility of using and handling the product in accordance with applicable federal, state, and local regulations.