



VAPCO PRODUCTS, INC.

Safety Data Sheet Tankless Water Heater Descaler

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Tankless Water Heater Descaler
Product number	TWHD-1, TWHD-8OZ
Brand	Vapco

1.3 Recommended use of the chemical and restrictions on use

Scale cleaner for tankless water heaters

1.4 Supplier's details

Name	Vapco Products, Inc.
Address	401 Marshall Road Valley Park, Missouri 63088 United States
Telephone	(636) 923-2121
Fax	(636) 923-3002
email	info@VapcoProducts.com

1.5 Emergency phone number

(800) 255-3924

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)

- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1B

2.2 GHS label elements, including precautionary statements

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Pictograms



Signal word

Danger

Hazard statement(s)

H314

Causes severe skin burns and eye damage

Precautionary statement(s)

P260

Do not breathe dust/fume/gas/mist/vapors/spray.

P264

Wash hands thoroughly after handling.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353

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

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338

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

P310

Immediately call a POISON CENTER/doctor if exposed or concerned.

P321

Specific treatment (see First Aid on this label).

P363

Wash contaminated clothing before reuse.

P405

Store locked up.

P501

Dispose of contents/container to the specifications of local, regional, national, and international regulations.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Phosphoric acid

Concentration 60 - 100 % (weight)

EC no. 231-633-2

CAS no. 7664-38-2

Index no. 015-011-00-6

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

If inhaled

First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Get medical advice/attention.

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In case of skin contact	Immediately drench affected area with water for at least 15 minutes. Remove contaminated clothing immediately. Obtain medical attention if irritation develops or persists.
In case of eye contact	Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
If swallowed	Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2 Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, dry chemical, or sand. Use appropriate media for surrounding fire.

5.2 Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

5.3 Special protective actions for fire-fighters

Firefighting Instructions: Use dry chemical, foam, or carbon dioxide (CO₂). Do not breathe fumes from fire or vapors from decomposition. Do NOT fight fire when fire reaches containers. Evacuate area. Fight fire remotely due to the risk of explosion. Shut off all sources of ignition. Use water spray or fog for cooling exposed containers.

Precautionary Fire Measures: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear NIOSH-approved Self-Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires.

Hazardous Combustion Products: Oxide(s) of phosphorus, hydrogen gas.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapors, spray, mist, gas. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedure: Eliminate ignition sources first, then ventilate the area. Evacuate unnecessary personnel, isolate, and ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

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6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and materials for containment and cleaning up

For Containment: Ventilate the area. Contain any spills with dikes or absorbents to prevent further migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Eliminate all ignition sources. Ventilate area. Stop the ignition source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Take up liquid spill into absorbent material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Waste Disposal: Dispose of in accordance with local, regional, national, and international regulations. Containers may be hazardous when empty. Do not flame cut, braze, or weld. Product should be fully characterized prior to disposal (40 CFR 261).

Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Do not breathe gas, mist, spray, vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not spray on open flame or other ignition source.

Additional Hazards When Processed: Do not pressurize, cut, or weld containers. Do not pierce or burn, even after use.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Other Precautions: Keep out of reach of children. Follow label instructions. Vapors may collect in low lying areas.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions: Store in a dry, cool place. Keep only in the original container in a cool, well-ventilated place away from ignition sources. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Incompatible Materials: Reacts vigorously with alkaline material or metals.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Phosphoric acid (CAS: 7664-38-2 EC: 231-633-2)

IOELV-LTEL [Orthophosphoric acid] (Inhalation): 1 mg/m³; EU (EU/OSHA)
List no. 1 under Council Directive 98/24/EC as amended. List last updated on 8/29/2023.

IOELV-STEL [Orthophosphoric acid] (Inhalation): 2 mg/m³; EU (EU/OSHA)
List no. 1 under Council Directive 98/24/EC as amended. List last updated on 8/29/2023.

PEL (Inhalation): 1 mg/m³; US (US/OSHA)

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OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 1 mg/m³, (ST) 3 mg/m³; US (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 1 mg/m³, (ST) 3 mg/m³; US (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

STEL (Inhalation): 3 mg/m³; AU (AU/SWA)

TWA (Inhalation): 1 mg/m³; AU (AU/SWA)

8.2 Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Use only outdoors or in well-ventilated area. Ensure all local, regional, national, and international regulations are being observed. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Chemical safety goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.

Skin protection

Wear protective gloves and clothing.

Body protection

Wear suitable protective clothing. Wear protective gloves. Chemical resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Respiratory protection

Use a NIOSH-approved Self-Containing Breathing Apparatus whenever exposure may exceed established Occupational Exposure Limits.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Color	Colorless
Odor	Odorless
Odor threshold	N/A
Melting point/freezing point	N/A
Boiling point or initial boiling point and boiling range	500°F (260°C)
Flammability	N/A
Lower and upper explosion limit/flammability limit	N/A
Flash point	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
pH	<1 (concentrate)
Kinematic viscosity	N/A

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Solubility	Completely soluble in water
Partition coefficient n-octanol/water (log value)	N/A
Vapor pressure	0.03 mmHg
Evaporation rate	N/A
Density and/or relative density	1.584
Relative vapor density	N/A

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts vigorously with alkaline material or metals.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals.

10.5 Incompatible materials

This product may react with reducing agents.

10.6 Hazardous decomposition products

Oxide(s) of phosphorus, hydrogen gas.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Phosphoric acid (CAS 7664-38-2)

Acute-Dermal LD50 Rabbit 2740 mg/kg

Oral LD50 Rat 1530 mg/kg

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitization

Not available.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, NTP, or OSHA.

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Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity (STOT) - single exposure

Not classified.

Specific target organ toxicity (STOT) - repeated exposure

Not classified.

Aspiration hazard

Not available.

Additional information

Chronic effects: Prolonged inhalation may be harmful.

SECTION 12: Ecological information

Toxicity

Because of the low pH of this product, it would be expected to product significant exotoxicity upon exposure to aquatic organisms and aquatic systems.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose on contents/container in accordance with local, regional, national, and international regulations.

Sewage disposal

Avoid release into the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Other disposal recommendations

Container may remain hazardous when empty. Continue to observe all precautions. Do not puncture or incinerate container. Product should be fully characterized prior to disposal.

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SECTION 14: Transport information

DOT (US)

UN Number: UN1805

Class: 8

Packing Group: III

Proper Shipping Name: Phosphoric acid solution

Reportable quantity (RQ): N/A

Marine pollutant: N/A

Poison inhalation hazard: N/A

IMDG

UN Number: UN1805

Class: 8

Packing Group: III

EMS Number: N/A

Proper Shipping Name: Phosphoric acid solution

IATA

UN Number: UN1805

Class: 8

Packing Group: III

Proper Shipping Name: Phosphoric acid solution

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components (105 CMR 670)

Chemical name: PHOSPHORIC ACID

CAS number: 7664-38-2

Massachusetts Toxic Use Reduction Act (TURA) list

Chemical name: Phosphoric acid

CAS number: 7664-38-2

New Jersey Right To Know Components

Common name: PHOSPHORIC ACID

CAS number: 7664-38-2

Pennsylvania Right To Know Components

Chemical name: PHOSPHORIC ACID

CAS number: 7664-38-2

US EPA TSCA public inventory

Chemical name: Phosphoric acid

CAS number: 7664-38-2

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SECTION 16: Other information

N/A = Not applicable; N/D = Not determined

16.1 Further information/disclaimer

To the best of our knowledge, information contained herein is accurate. However there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions of handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

16.2 Preparation information

Prepared by: Jessica Wilson

Date prepared: 6/25/2025

