

document  
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(98)

pHREEdom T2000



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MATERIAL SAFETY DATA SHEET

Section 1. PRODUCT IDENTIFICATION

PRODUCT NAME: pHREEdom T2000

CHEMICAL DESCRIPTION: Alkaline aqueous solution of organic phosphonates, acrylate terpolymer, and monoethanolamine.

PRODUCT CLASS: Scale inhibitor  
MSDS CODE: OH28-02-26-96

Section 2. INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>	<u>% by Weight</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Sodium salt of phosphonomethylated diamine	103016*	8 - 10	None established	None established
Disodium hydroxyphosphonoacetate	128192-25-6	4 - 6	None established	None established
Monoethanolamine (MEA)	141-43-5	5	TWA 3 ppm, 8 mg/m <sup>3</sup> ; STEL 6 ppm, 15 mg/m <sup>3</sup>	TWA 3 ppm, 7.5 mg/m <sup>3</sup> ; STEL 6 ppm, 15 mg/m <sup>3</sup>

\*TSCA Accession number.

Section 3. HAZARDS IDENTIFICATION

\*\*\*\*\* EMERGENCY OVERVIEW \*\*\*\*\*

WARNING!  
May cause eye and respiratory tract irritation.  
May cause allergic skin reaction.

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PRIMARY ROUTES OF ENTRY: Eye and skin contact, inhalation, skin absorption

TARGET ORGANS: Eye, skin, central nervous system

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Unknown

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**POTENTIAL HEALTH EFFECTS:**

**EYE CONTACT:** This product may produce irritation upon contact with the eye.

**SKIN CONTACT:** Prolonged or repeated exposure may cause irritation resulting in rashes and dermatitis. By OSHA definition, pure monoethanolamine is toxic by skin absorption. Prolonged or widespread skin contact may result in the absorption of harmful amounts of material. There is no evidence that the ethanolamines can cause allergic contact dermatitis. However, neutralized hydroxyphosphonoacetic acid has recently been reported to be a skin sensitizer in a guinea pig study. Therefore, the product, which contains 4 - 6% disodium hydroxyphosphonoacetate, may cause an allergic skin reaction in sensitive individuals.

**INGESTION:** Swallowing this product may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

**INHALATION:** Inhalation of product mist or vapor may result in irritation with coughing and discomfort of the nose, throat, and chest. Prolonged exposures to elevated concentrations may cause weakness, CNS depression and drowsiness. In animal experiments, subacute high level exposures to monoethanolamine vapor and mist produced pulmonary damage, lethargy, and some non-specific degenerative changes in the liver and kidneys. Lab tests have found monoethanolamine to be a central nervous system (CNS) stimulant at low doses, and a CNS depressant at lethal doses.

**SUBCHRONIC, CHRONIC:**

No applicable information was found concerning any potential health effects resulting from subchronic or chronic exposure to the product.

Prolonged or repeated exposure to monoethanolamine may cause liver and kidney damage. Long-term inhalation of monoethanolamine vapors has caused nerve damage in laboratory animals. Oral intake of monoethanolamine during pregnancy has caused embryotoxicity and maternal toxicity in rats. Exposures having no effect on the mother should have no effect on the fetus.

There is evidence that no embryofetotoxicity or teratogenicity was produced in rats or rabbits when MEA was administered by skin contact. In spite of the widespread use of monoethanolamine in industry, no reports of injury to workers have been found.

**CARCINOGENICITY:**

**NTP:**

\*No ingredients listed in this section\*

**IARC:**

\*No ingredients listed in this section\*

**OSHA:**

\*No ingredients listed in this section\*

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**Section 4. FIRST AID MEASURES**

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**EYE CONTACT:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical aid.

**SKIN CONTACT:** In case of contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Seek medical aid if symptoms occur. Wash clothing before reuse.

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**INGESTION:** Not an expected route of overexposure.

**INHALATION:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical aid.

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**Section 5. FIRE-FIGHTING MEASURES**

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**FLASH POINT:** Not determined  
The flash point is expected to be > 200 °F.

**LOWER FLAMMABLE LIMIT:** Not available      **UPPER FLAMMABLE LIMIT:** Not available

**AUTO-IGNITION TEMPERATURE:** Not available

**EXTINGUISHING MEDIA:** Use water spray or fog, alcohol-type foam, dry chemical or carbon dioxide.

**FIRE-FIGHTING INSTRUCTIONS:** Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential.  
Use water to keep fire-exposed containers cool.

**FIRE & EXPLOSION HAZARDS:** Product emits toxic gases under fire conditions.

**DECOMPOSITION PRODUCTS:** Thermal decomposition or combustion may produce carbon monoxide, carbon dioxide, ammonia, nitrogen oxides, sulfur oxides, and phosphorus oxides.

**NFPA RATINGS:** Health = 1      Flammability = 1      Reactivity = 0      Special Hazard = None

Hazard rating scale: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

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**Section 6. ACCIDENTAL RELEASE MEASURES**

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**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:** Ventilate area of spill. Wearing appropriate personal protective equipment, contain spill, collect onto inert absorbent and place into suitable container. Do not allow to contaminate sewers and waterways. Spilled product may make floor slippery; spills should be cleaned up immediately to prevent falls.

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**Section 7. HANDLING AND STORAGE**

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**HANDLING:** Avoid contact with eyes, skin and clothing.  
Avoid breathing vapor or mist.  
Use with adequate ventilation.  
Drums should be opened in well-ventilated areas.  
Wash thoroughly after handling.  
Keep container closed when not in use.

**STORAGE:** No specific information.

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**Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**PERSONAL PROTECTIVE EQUIPMENT:**

**EYE/FACE PROTECTION:** Chemical splash goggles

**SKIN PROTECTION:** Chemical resistant gloves and protective clothing

**RESPIRATORY PROTECTION:** If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

**ENGINEERING CONTROLS:** Provide ventilation to minimize exposure. Use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

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**Section 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**BOILING POINT:** Not available

**SOLUBILITY IN WATER:** Complete

**VAPOR PRESSURE:** Not available

**SPECIFIC GRAVITY:** 1.174 - 1.194 @ 25° C

**VAPOR DENSITY (air = 1):** Not available

**pH:** 10.0 - 11.0 @ 25° C

**%VOLATILE BY WEIGHT:** ~ 78

**FREEZING POINT:** Not available

**APPEARANCE AND ODOR:** Clear to slightly hazy, dark gold to brown liquid with pungent odor.

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**Section 10. STABILITY AND REACTIVITY**

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**CHEMICAL STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** No specific information.

**INCOMPATIBILITY:** Strong oxidizers and acids

**DECOMPOSITION PRODUCTS:** Thermal decomposition or combustion may produce carbon monoxide, carbon dioxide, ammonia, nitrogen oxides, sulfur oxides, and phosphorus oxides.

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**Section 11. TOXICOLOGICAL INFORMATION**

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**ON PRODUCT:**

No information available on the formulated product.

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## ON INGREDIENTS:

<u>Chemical Name</u>	<u>Oral LD<sub>50</sub> (rat)</u>	<u>Dermal LD<sub>50</sub> (rabbit)</u>	<u>Inhalation LC<sub>50</sub> (rat)</u>
Sodium salt of phosphonomethylated diamine	Not available	Not available	Not available
Disodium hydroxyphosphonoacetate	Not available	Not available	Not available
Monoethanolamine (MEA)	1720 mg/kg	1000 mg/kg	Not available

**Section 12. ECOLOGICAL INFORMATION**

## ON PRODUCT:

No information available on the formulated product.

## ON INGREDIENTS:

<u>Chemical Name</u>	<u>Aquatic Toxicity Data</u>
Monoethanolamine	96 hr LC <sub>50</sub> (fathead minnow): 125 ppm 24 hr LC <sub>50</sub> (Daphnia magna): 140 ppm 96 hr LC <sub>50</sub> (bluegill sunfish): 75 ppm 96 hr LC <sub>50</sub> (rainbow trout): 150 ppm

**Section 13. DISPOSAL CONSIDERATIONS**

RCRA STATUS: Discarded product, as sold, would not be considered a RCRA Hazardous Waste.

DISPOSAL: Dispose of in accordance with local, state and federal regulations.

**Section 14. TRANSPORT INFORMATION**

## DOT CLASSIFICATION:

Class/Division: Not restricted  
Proper Shipping Name: Not applicable  
Label: None  
Packing Group: Not applicable  
ID Number: Not applicable

**Section 15. REGULATORY INFORMATION**

OSHA Hazard Communication Status: Hazardous

TSCA: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA reportable quantity of EPA hazardous substances in product:

<u>Chemical Name</u>	<u>RQ</u>
No ingredients of this product have CERCLA reportable quantities.	
Product RQ: Not applicable	(Notify EPA of product spills exceeding this amount.)

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SARA TITLE III:

**Section 302 Extremely Hazardous Substances:**

<u>Chemical Name</u>	<u>CAS #</u>	<u>RQ</u>	<u>TPQ</u>
There are no SARA 302 Extremely Hazardous Substances in this product.			

**Section 311 and 312 Health and Physical Hazards:**

Immediate [yes]	Delayed [no]	Fire [no]	Pressure [no]	Reactivity [no]

**Section 313 Toxic Chemicals:**

<u>Chemical Name</u>	<u>CAS #</u>	<u>% by Weight</u>
There are no reportable SARA 313 Toxic Chemicals in this product.		

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**Section 16. OTHER INFORMATION**

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HMIS RATINGS: Health = 1 Flammability = 1 Reactivity = 0  
Personal Protective Equipment = X (to be specified by user depending on use conditions)

Hazard rating scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

MSDS REVISION SUMMARY: Not applicable

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While this information and recommendations set forth herein are believed to be accurate as of the date hereof, CALGON CORPORATION MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

PREPARED BY: P.J. Maloney