



North Metal and Chemical Company

1. Company Identification:

Product Name : North BHMTMPMA
Synonyms : NorthQuest 6800: PCI 1445
Product Use : Scale inhibitor and dispersing agent for use in industrial water treatment programs.
Chemical Name : Bis(HexaMethylene Triamine Penta (Methylene Phosphonic Acid)), BHMTMPMA
Manufactured for : North Metal and Chemical Company
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In Case of Emergency Call CHEMTREC (24 Hours): 1-800-424-9300 (USA & CANADA)

2. Hazard Identification:

GHS Classification:

Skin Corrosion (Category 1)
Aquatic Toxicity Chronic (Category 3)
Corrosive to Metals (Category 1)
Acute Toxicity—Oral (Category 4)
Acute Toxicity—Inhalation (Category 4)

Signal Word: Danger

Pictograms:



HAZARD STATEMENTS:

H290: May be corrosive to metals
H303: May be harmful if swallowed
H314: Causes severe skin burns and eye damage
H332: Harmful if inhaled
H412: Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

Prevention:

P234: Keep only in original container
P260: Do not breathe dust/fumes/mist/vapors/spray
P262: Do not get in eyes, on skin, or on clothing
P264: Wash thoroughly after handling
P271: Use only outdoors in a well ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection

Response:

P310: Immediately call a POISON CENTER or doctor/physician
P360: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P302 + P352: IF ON SKIN: Wash skin with plenty of soap and water
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P501: Dispose of contents/container in accordance with all applicable laws and regulations.

3. Composition/Information on Ingredient:

Chemical Name : Bis HexaMethylene Triamine Penta Methylene Phosphonic Acid, BHMTMPMA
Chemical Family : Phosphonates
Chemical Formula : C₁₇H₄₄O₁₅N₃P₅
CAS Number : 34690-00-1

Substance:	CAS Number:	Hazard	Compo. (%)
Bis HexaMethylene Triamine Penta Methylene Phosphonic Acid	34690-00-1	See Section 2	43-48%
Water	7732-18-5	-	52-57%

4. First Aid Measures:

General Advice: If victim is unconscious, get medical attention immediately. Place the unconscious victim in recover position and maintain an open airway. Loosen tight clothing.

Inhalation: If safe to do so, remove individual from further exposure. Keep warm and at rest. Seek medical attention. In case of breathing difficulties, administer oxygen. If breathing has stopped, give artificial respiration.

Skin contact: Flush skin with plenty of running water for at least 15 minutes. Remove contaminated clothing. Get medical attention immediately. Clean and dry contaminated clothing thoroughly before reuse.

Eye contact: Flush with running water for at least 15 minutes, periodically lifting upper and lower eyelids. Remove any contact lenses if safe to do so. Get medical attention immediately.

Ingestion: If the product is swallowed, rinse mouth with large quantities of water and call doctor/poison center immediately. Drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

5. Fire Fighting Measures:

Flash Point (°C): No data available. **Flammable Limits:** No data available.

Auto ignition Temp.: No data available. **Decomposition Temp:** No data available.

Flame Propagation or Burning Rate of Solids: No data available.

General Hazard: Evacuate personnel in a manner to avoid inhalation of irritating and/or harmful fumes and smoke.

Extinguishing Media: Water spray, chemical-type foam, carbon dioxide. Do not use high power water jet. Appropriate for the surrounding area.

Hazardous Decomposition

Products: Oxides of carbon (CO_x), nitrogen (NO_x), and phosphorous compounds such as phosphorus oxides and phosphines.

Fire Fighting Hazards: Fires in the immediate vicinity may cause the development of dangerous vapors. In the event of a fire, the following may be product when the water evaporates: phosphorous compounds, carbon monoxides and carbon dioxides.

Fire Fighting Procedure/Equipment: Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (bunker gear) and self-contained breathing apparatus (SCBA) should be used for all fires. Evacuate area and fight fire from safe distance or a protected location. Move fire-exposed containers, if allowable without sacrificing the safety of others and firefighters. If possible and without risk, firefighters should control run-off water to prevent environmental contamination.

DO NOT ALLOW WATER USED TO EXTINGUISH FIRE TO ENTER DRAINS, GROUNDS OR WATER WAYS. TREAT RUNOFF AS HAZAROUS.

6. Accidental Release Measures:

Protective Gear for Personnel:

For Small Spill: Safety glasses or chemical splash goggles, chemically resistant gloves, chemically resistant boots, and any appropriate body protection to minimize direct contact to the skin. Wear respiratory protection. Avoid dust formation. Avoid breathing dust or mist.

For Large Spill: Triple gloves (rubber and nitrile over latex), chemical resistant suit, boots, hard hat, full face mask/an air purifying respirator (NIOSH approved). Self contained breathing apparatus must be worn in situations where fumigant gas generation and low oxygen levels are a consequence of contamination from the leak.

Spill Clean-up Procedures:

General Procedure: Remove all sources of ignition from spill area. Ventilate area. Do not let chemicals/waste enter land or water environment.

For Small Spill: In the event of a small spill, the spill should be swept up or contained with an absorbent pad and placed in a properly labeled waste container immediately. Wash the spill area and contain the waste in a labeled waste container without letting the wash enter the sewer/environment. Dispose the spill/waste according to state, federal and local hazardous waste regulations.

For Large Spill: In the event of a large spill, contain the spill immediately with dikes and dispose according to state, federal, and local hazardous waste regulation.

Environmental Precaution

7. Handling and Storage:

Handling: Use appropriate personal protective equipment as specified in Section 8. Handle the product in a well-ventilated area. Handle in a manner consistent with good industrial/manufacturing techniques and practices. Keep away from combustible materials. Wash hands thoroughly with soap and water after use. Remove contaminated clothing and protective equipment before entering eating areas.

Storage: Store in a cool, dry well-ventilated area. Keep containers closed when not in use. Keep product isolated from incompatible materials/conditions such as freezing temperatures.

P406: Store in a corrosion resistant container

Qualified Materials: Glass, PVC, polypropylene, polyethylene

Unqualified Materials: Aluminum, Steel, metals.

Storage temperature: > -10 °C

8. Exposure Controls and Personal Protection:

Engineering Controls: Use appropriate engineering controls to minimize exposure to vapors generated via routine use. Maintain adequate ventilation of workplace and storage areas.

Personal Protective Equipment:

Eyes and face: Wear NIOSH approved safety glasses with side shields or goggles when handling this material.

Hand: **Protective gloves**

Qualified materials: PVC, polyethylene, Polypropylene

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Body: Avoid direct contact with skin. Wear chemically resistant gloves, apron, boots or whole bodysuit when handling this product.

Respiratory: Avoid breathing vapor or mist. Use respirators and components tested and approved under appropriate government standards such as NIOSH or CEN. Where risk assessment shows air-purifying respirators are appropriate use a full face particle respirator type N100 or type A P2 respirator cartridges as a back up to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Work Hygienic Practices: Facilities storing or using this material should be equipped with emergency eyewash, and a safety shower. Good personal hygiene practices should always be followed.

9. Chemical and Physical Properties:

Appearance	: Brown Liquid	Vapor Pressure	: No Data Available
Odor	: Characteristic	Vapor Density	: No Data Available
Odor threshold	: Not applicable	Specific Gravity	: 1.200 min @ 20°C
Color	: Brown	Solubility	: Fully Miscible in water
pH	: 2.0 max @ 25°C	Partition Coefficient	: No Data Available
Melting Point	: -12°C	Viscosity (Kinematic)	: No Data Available
Freezing Point	: -12°C	Decomposition Temp.	: No Data Available
Boiling Range	: No Data Available		
Flash Point	: No Data Available		

10. Stability and Reactivity:

Stability: The product is stable under normal ambient conditions of temperature and pressure.

CORROSIVE TO METALS (ALUMINIUM & STEEL)

Polymerization: Polymerization will not occur.

Hazardous

Decomposition Products: In case of fire the following may be liberated: nitrogen oxide (NO_x), phosphorous oxides, phosphine, carbon monoxide and carbon dioxide.

Incompatible Materials: Strong oxidizing agents, alkalis, and caustic substances. Reacts with steel and aluminum.

Conditions to Avoid: Avoid exposure to extreme temperatures, contact with incompatible chemicals, uncontrolled contact with accelerants.

11. Toxicological Information:

Acute Oral Toxicity:

LD50 Oral - Rat: > 2.910 mg/kg

Acute Dermal Toxicity:

LD50 Dermal - Rabbit: > 6.310 mg/kg

Acute Inhalation Toxicity:

LD50 Inhalation - Rat: No data available.

Corrosion/Irritation:

Skin : Rabbit, irritating to skin, 24hrs

Eyes : Rabbit, irritating to eyes, 24hrs

Carcinogenicity : rat, diet, 24 months. Chronic exposure to animals produced no increase in tumor incidence.

Mutagenicity* : The weight of the evidence indicates that this material is not mutagenic in-vitro assays

Reproductive Effects : rat, diet, 3 generations. This material had no effect on reproduction or fertility.

Teratogenic Effects : No data available

Specific target organ toxicity: liver, spleen, kidneys

Routes of Exposure : Eyes, Skin, Inhalation, Ingestion

12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

Toxicity:	Harmful effects on water organisms by modification of pH value
Algae Toxicity:	EC50 Selenastrum capricornutum: > 20mg/L/96h
Daphnia Toxicity:	EC50 Daphnia magna (big water flea): 297 mg/L/48h
Fish Toxicity:	LC50 Oncorhynchus mykiss: 330 mg/L/96h

Water hazard class: 1 - slightly hazardous to water.

Persistence and degradability:

Biodegradability: Product is not readily biodegradable.

Bioaccumulative Potential: No indication of bioaccumulation potential.

Mobility in Soil: No data available.

Other Adverse Effects: Do not allow to enter into ground water, surface water or drains.

13. Disposal Considerations:

Disposal Method : Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

For Large Spills : Contain material and call local authorities for emergency assistance.

Product Disposal : Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable local, state and federal laws, regulations and product characteristics at time of disposal.

Empty Container : Contaminated container should be labeled and disposed in accordance to local, state and federal laws and regulations.

General Comments : Refer to section 6, accidental release measures, for additional information.

14. Transport Information:

Regulatory Information	UN No.	Proper Shipping Name	UN Class	Packing Group	Label
US DOT	3265	Corrosive Liquid, Acidic, Organic, N.O.S. (Bis(hexamethylene)Triamine(Pentamethylene Phosphonic Acid))	8	III	Corrosive
IMDG	3265	Corrosive Liquid, Acidic, Organic, N.O.S. (Bis(hexamethylene)Triamine(PentaMethylene Phosphonic Acid))	8	III	Corrosive

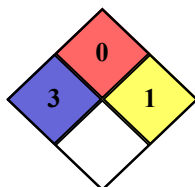
15. Regulatory Information:

U.S. Federal Regulations:

TSCA Status:	All components of this product are in compliance with TSCA
CERCLA Section 103 (40 CFR 302.4):	No components of this products are listed.
Section 311/312 Categorizations (40 CFR 370):	Acute Health Hazards
SARA Section 313:	No components of this products are listed.

16. Other Information:

NFPA Rating:*



*NFPA Key:

HEALTH 3 - Serious
FLAMMABILITY 0 - Minimal
REACTIVITY 1 - Slight
SPECIFIC HAZARD —None

HMIS Rating:*

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	C

*HMIS Key:

HEALTH 3—Serious
FLAMMABILITY 0 - Minimal
PHYSICAL HAZARD 1 - Slight
PERSONAL PROTECTION C — Safety Glasses. Gloves, Protective Apron

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