

# SAFETY DATA SHEET

Issue Date 23-May-2016

Revision Date 10-Aug-2016

Version 4

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## 1. IDENTIFICATION

### Product identifier

**Product Name** Phosphorus LR TNT Reagent C

### Other means of identification

#### **Product Code(s)**

TNT843C

**Safety data sheet number** M02446

**Component of Kits or Sets** 2925000; 2925100; 2925100K; TNT843

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory reagent.

**Uses advised against** None.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Hach Company  
P.O.Box 389 Loveland, CO 80539 USA  
(970) 669-3050

#### Emergency telephone number

(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

### Product Information

**Chemical Name** Not applicable

**Formula** Not applicable

**CAS No** Not applicable

**Alternate CAS Number** Not applicable

**NIOSH (RTECS) Number** None reported

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

#### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

**Signal word** - Warning

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**Hazard statements**

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H361 - Suspected of damaging fertility or the unborn child  
H335 - May cause respiratory irritation

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P281 - Use personal protective equipment as required  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
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  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P405 - Store locked up  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Information**

Not applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

**Chemical Family** Mixture.

Percent ranges are used where confidential product information is applicable.

Chemical Name	CAS No	Percent Range	HMRIC #
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate	10555-76-7	10 - 30	-

## 4. FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. IF exposed or concerned: Get medical advice/attention.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. If symptoms persist, call a physician.
<b>Self-protection of the first aider</b>	First aider: Pay attention to self-protection. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### Most important symptoms and effects, both acute and delayed

**Symptoms** See Section 11: TOXICOLOGICAL INFORMATION.

### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Carbon dioxide. Dry chemical. Water.

**Unsuitable extinguishing media** No information available.

### Flammable properties

Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS criteria.

### Specific hazards arising from the chemical

May react violently with: strong oxidizers.

### **Hazardous combustion products**

carbon monoxide, carbon dioxide. sodium oxides. Boron compounds.

### 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.

## 6. ACCIDENTAL RELEASE MEASURES

### **U.S. Notice**

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

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Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**EC Notice**

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

**WHMIS Notice**

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protective equipment as required.

**For emergency responders** Use personal protective equipment as required.

**Environmental precautions**

**Environmental precautions** Stop spilled material from being released to the environment. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop spilled material from being released to the environment.

**Methods for cleaning up** Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

**Emergency Response Guide Number** Not applicable

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**Flammability class** Not applicable

**Incompatible materials** Oxidizers. Copper. Iron. Alkali.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate 10 - 30	STEL: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	NDF	NDF

Chemical Name	Alberta OEL	British Columbia	Manitoba OEL	New Brunswick	Newfoundland &
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		OEL		OEL	Labrador OEL
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate 10 - 30	NDF	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	NDF	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate 10 - 30	NDF	STEL: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	NDF	NDF	STEL: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>

**Legend** See section 16 for terms and abbreviations

#### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

#### Environmental exposure controls

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

**Physical state** Solid

**Gas Under Pressure** Not classified according to GHS criteria

**Appearance** No information available

**Color** white

**Odor** Not determined

**Odor threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	No data available	
<b>Melting point/freezing point</b>	192 °C / 378 °F	
<b>Boiling point / boiling range</b>	No data available	
<b>Evaporation rate</b>	Not applicable	

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Vapor pressure	Not applicable
Vapor density (air = 1)	Not applicable
Specific gravity (water = 1 / air = 1)	> 0.6
Partition Coefficient (n-octanol/water)	No data available
Soil Organic Carbon-Water Partition Coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	Not applicable
Kinematic viscosity	Not applicable

#### Solubility(ies)

##### Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	330000 mg/L	20 °C / 68 °F

##### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
None reported	No information available	No data available	No information available

#### Other Information

<b>Metal Corrosivity</b>	Not classified as corrosive to metal according to GHS criteria
<b>Steel Corrosion Rate</b>	Not applicable
<b>Aluminum Corrosion Rate</b>	Not applicable
<b>Volatile Organic Compounds (VOC) Content</b>	Not applicable.
<b>Bulk density</b>	No data available
<b>Explosive properties</b>	Not classified according to GHS criteria.
<b>Explosion data</b>	Can burn in fire, releasing toxic vapors.
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Flammable properties</b>	Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS criteria.
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No data available
<b>Lower flammability limit:</b>	No data available
<b>Flash point</b>	Not applicable

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**Oxidizing properties**

Not classified according to GHS criteria.

**Reactivity properties**

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

## 10. STABILITY AND REACTIVITY

**Reactivity properties**

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

**Chemical stability**

Stable under recommended storage conditions.

**Special dangers of the product**

None reported

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

Excess moisture. Poor Ventilation.

**Incompatible materials**

Oxidizers. Copper. Iron. Alkali.

**Hazardous Decomposition Products**

Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.

**Explosive properties**

Not classified according to GHS criteria. Can burn in fire, releasing toxic vapors.

**Upper explosion limit**

No data available

**Lower explosion limit**

No data available

**Autoignition temperature**

No data available

**Sensitivity to Static Discharge**

None reported

**Sensitivity to Mechanical Impact**

None reported

## 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Product Information**

May cause respiratory irritation. Causes skin irritation. Causes eye irritation.

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<b>Inhalation</b>	Avoid breathing dust/fume/gas/mist/vapors/spray. Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Eye contact</b>	Contact with eyes may cause irritation.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes.
<b>Aggravated Medical Conditions</b>	Pre-existing: Eye disorders. Skin disorders. Respiratory disorders.
<b>Toxicologically synergistic products</b>	None known.
<b>Toxicokinetics, metabolism and distribution</b>	See ingredients information below.

<b>Chemical Name</b>	<b>Toxicokinetics, metabolism and distribution</b>
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate (10 - 30) CAS#: 10555-76-7	Boric acid, sodium salt and borates are not metabolized, neither do they accumulate in the body except for low deposit in bone. No organic boron compounds have been reported as metabolites.

#### Product Acute Toxicity Data

**Oral Exposure Route** No data available

**Dermal Exposure Route** No data available

**Inhalation (Dust/Mist) Exposure Route** No data available

**Inhalation (Vapor) Exposure Route** No data available

**Inhalation (Gas) Exposure Route** No data available

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	5,478.00 mg/kg
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#### Ingredient Acute Toxicity Data

##### **Oral Exposure Route**

<b>Chemical Name</b>	<b>Endpoint type</b>	<b>Reported dose</b>	<b>Exposure time</b>	<b>Toxicological effects</b>	<b>Key literature references and sources for data</b>
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate (10 - 30) CAS#: 10555-76-7	Rat LD <sub>50</sub>	2330 mg/kg	None reported	None reported	HSDB (Hazardous Substances Data Bank)

**Dermal Exposure Route** No data available

**Inhalation (Dust/Mist) Exposure Route** No data available

**Inhalation (Vapor) Exposure Route** No data available

**Inhalation (Gas) Exposure Route** No data available

#### Product Skin Corrosion/Irritation Data

No data available.

#### Ingredient Skin Corrosion/Irritation Data

No data available



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**Product Serious Eye Damage/Eye Irritation Data**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available

**Sensitization Information**

**Product Sensitization Data**

**Skin Sensitization Exposure Route** No data available.

**Respiratory Sensitization Exposure Route** No data available.

**Ingredient Sensitization Data**

**Skin Sensitization Exposure Route** No data available.

**Respiratory Sensitization Exposure Route** No data available.

**Chronic Toxicity Information**

**Product Repeat Dose Toxicity Data**

**Oral Exposure Route** No data available.

**Dermal Exposure Route** No data available.

**Inhalation (Dust/Mist) Exposure Route** No data available.

**Inhalation (Vapor) Exposure Route** No data available.

**Inhalation (Gas) Exposure Route** No data available.

**Ingredient Repeat Dose Toxicity Data**

**Oral Exposure Route** No data available

**Dermal Exposure Route** No data available

**Inhalation (Dust/Mist) Exposure Route** No data available

**Inhalation (Vapor) Exposure Route** No data available

**Inhalation (Gas) Exposure Route** No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate	10555-76-7	-	-	-	-

**Legend**

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	X - Present

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**Product Carcinogenicity Data**

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Ingredient Carcinogenicity Data**

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Product Germ Cell Mutagenicity *invitro* Data**

No data available.

**Ingredient Germ Cell Mutagenicity *invitro* Data**

No data available

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Ingredient Germ Cell Mutagenicity *invivo* Data**

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

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**Ingredient Reproductive Toxicity Data**

<b>Oral Exposure Route</b>	No data available
<b>Dermal Exposure Route</b>	No data available
<b>Inhalation (Dust/Mist) Exposure Route</b>	No data available
<b>Inhalation (Vapor) Exposure Route</b>	No data available
<b>Inhalation (Gas) Exposure Route</b>	No data available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity** Based on the classification principles, not classified as hazardous to the environment.

**Product Ecological Data**

**Aquatic toxicity**

<b>Fish</b>	No data available
<b>Crustacea</b>	No data available
<b>Algae</b>	No data available

**Terrestrial toxicity**

<b>Soil</b>	No data available
<b>Vertebrates</b>	No data available
<b>Invertebrates</b>	No data available

**Ingredient Ecological Data**

**Aquatic toxicity**

<b>Fish</b>	No data available
<b>Crustacea</b>	No data available
<b>Algae</b>	No data available

**Terrestrial toxicity**

<b>Soil</b>	No data available
<b>Vertebrates</b>	No data available
<b>Invertebrates</b>	No data available

**Other Information**

**Persistence and degradability**

No information available.

**Product Biodegradability Data**

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No data available.

**Ingredient Biodegradability Data**

No data available

**Bioaccumulation**

No information available.

**Product Bioaccumulation Data**

No data available.

**Ingredient Bioaccumulation Data**

No data available

**Additional information**

**Product Information**

No data available

**Partition Coefficient (n-octanol/water)**

No data available

**Ingredient Information**

Chemical Name	Partition Coefficient (n-octanol/water)	Method
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate (10 - 30) CAS#: 10555-76-7	log K <sub>ow</sub> = -3.73	Estimation through KOWWIN v1.68 part of the Estimation Programs Interface (EPI) Suite™

**Mobility**

No information available.

**Product Information**

No data available

**Soil Organic Carbon-Water Partition Coefficient**

No data available

**Ingredient Information**

**Additional information**

**Water solubility**

**Product Information**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	330000 mg/L	20 °C / 68 °F

**Ingredient Information**

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate (10 - 30) CAS#: 10555-76-7	Completely soluble	20000 mg/L	20 °C	68 °F

**Other adverse effects**

Contains a substance with an endocrine-disrupting potential.

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Dispose of in accordance with federal, state and local regulations.

### 14. TRANSPORT INFORMATION

<b><u>DOT</u></b>	Not regulated
<b><u>TDG</u></b>	Not regulated
<b><u>IATA</u></b>	Not regulated
<b><u>IMDG</u></b>	Not regulated

#### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

### 15. REGULATORY INFORMATION

#### **National Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

#### **International Inventories**

<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TCSI** - Taiwan Chemical Substances Inventory

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

#### **US Federal Regulations**

**SARA 313**

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Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Boric acid (HBO <sub>2</sub> ), sodium salt, tetrahydrate 10555-76-7	X	-	-

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**NFPA and HMIS Classifications**

NFPA	Health hazards - 2	Flammability - 0	Instability - 0	Physical and Chemical Properties -
HMIS	Health hazards - 2*	Flammability - 0	Physical hazards - 0	Personal protection - X - See section 8 for more information

**Key or legend to abbreviations and acronyms used in the safety data sheet**

NIOSH IDLH  
ACGIH  
NDF

*Immediately Dangerous to Life or Health*  
ACGIH (American Conference of Governmental Industrial Hygienists)  
*no data*

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**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

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**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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**End of Safety Data Sheet**