

# TIM-BOR® Professional

## Wood Preservative/Insect Control

For protection and preventative treatment of wood\* against decay fungi and wood destroying insects, and for remedial control of such pests in infested wood.

(\*Also for wood-foam composite structural components.)

**COMMERCIAL  
EYE IRRITANT**

REGISTRATION NO. 24091  
PEST CONTROL PRODUCTS ACT

**READ THE LABEL BEFORE USING**

### GUARANTEE:

Disodium Octaborate Tetrahydrate. . . . 98%  
(Na<sub>2</sub>B<sub>8</sub>O<sub>13</sub>•4H<sub>2</sub>O)

24 Hour Emergency Number  
(1) 866-334-3571

### DIRECTIONS FOR USE:

#### General information

**TIM-BOR Professional** is a water soluble inorganic borate salt with insecticidal, termiticidal, and fungicidal properties. This product can be used for preventative treatment of wood in existing structures (before signs of infestation) and for remedial treatment of wood infested with termites, carpenter ants and wood-boring beetle larvae, as specified below.

#### Control of wood destroying organisms

**TIM-BOR Professional** is recommended for wood and cellulose materials, in accordance with the specific treatment methods described herein. **TIM-BOR Professional** is effective for all interior and exterior wood (and wood-foam composite structural components) that will be protected from excessive rain and not in direct contact with soil. Types of wood include, but are not limited to, all types of lumber, logs, and plywood. This product is toxic to wood-destroying insects, but surface etching of treated wood by target organisms may occur. Application of **TIM-BOR Professional** to control wood-destroying organisms must be part of an Integrated Pest Management (IPM) strategy.

#### Target organisms

**TIM-BOR Professional** is effective for treatment of wood (and wood-foam composite structural components) against decay fungi, including brown (i.e. Poria), white rots and the following wood boring termites, beetles and carpenter ants:

- Subterranean Termites, e.g. Reticulitermes (Termitidae)
- Drywood Termites, e.g. Incisitermes (Kalotermitidae)
- Dampwood Termites, e.g. Zootermopsis (Hodotermitidae)
- Furniture and Deathwatch Beetles (Anobiidae)
- Powder Post Beetles (Lyctidae)
- Old House Borers, Longhorn Beetles (Cerambycidae)
- Carpenter Ants (Camponotus)

#### Mixing instructions

**•10% aqueous solution (approximate):** To prepare solution, water should be added to the tank to about 80% of the final volume of solution required. While agitating, add 120 g (0.12 kg) of **TIM-BOR Professional** gradually for each litre of treating solution required. The remaining water is then added and the solution is agitated until the product has dissolved.

**•15% aqueous solution (approximate):** Prepare solution as above, but gradually add 180 g (0.18 kg) of **TIM-BOR Professional** for each litre of treating solution that is required. Note: this concentrated solution should be used immediately and should not be stored. Equipment should be rinsed and cleaned after use.

**•15% foam (approximate):** Prepare 15% aqueous solution as listed above and add surfactant/foaming agent. Typically 30-60 mL of foaming agent added to one litre of the 15% aqueous solution will produce a dry foam with the desired expansion ratios of approximately 20 to 1 (approx. 20 litres of foam per litre of aqueous solution). **TIM-BOR Professional** foam should be of a consistency that adheres to wood surfaces, so that run off is minimized. Since each foam machine can produce different foams, refer to the equipment manufacturer manuals and the surfactant's label for specific instructions.

#### Application

**TIM-BOR Professional** may be used as a solution, powder or foam. No product should be visible in living areas after application.

**• Solutions:** For remedial control of organism attacking wood, or for protection of wood, against future infestations, 2 applications of the 10% aqueous solution are normally required. Alternatively, apply 1 application of the 15% aqueous solution. Apply solutions of **TIM-BOR Professional** by brush or spray until wood surface is thoroughly wet, at a rate of approximately 1 litre per 5 square metres of wood surface area (or 20 litres per 100 square metres). Spray evenly using medium or coarse spray at low pressures (1-2 kg/cm<sup>2</sup>). Best results and penetration will be obtained when ambient temperatures are over 13°C. Do not spray frozen wood, painted or waterproofed surfaces. After treatment, exterior wood surfaces should be sealed to prevent **TIM-BOR Professional** from diffusing out. Wood should be completely dry before a sealing coat (paint, varnish or waterproofing seal) can be applied. Application may also be made by drilling and then injecting the solution under pressure into sound wood or until runoff is observed from entry/exit holes of infested wood. Injection holes (approximately 3 mm diameter) should be drilled in the area of suspected infestation, preferably in a diamond pattern with the long axis (30-40 cm) along the grain and the short axis (10-15 cm) across. Drill holes approximately ¼ of the thickness of the beam. The solution is injected under pressure (4-5 kg/cm<sup>2</sup>) for 15-60 seconds in each hole.

**• Powder:** Alternatively, apply **TIM-BOR Professional** powder to wood members by drill and injection into galleries or dust generously on wood surfaces. **TIM-BOR Professional** powder can also be injected into wall voids such as between studs, block voids, box sill, eaves, attics, soffits, etc. Apply powder at a rate of approximately 130-150 g per square metre.

**• Foam:** Apply foam so that all accessible wood surfaces are covered with foam.

Where possible, place foam between wood joints or abutting wood surfaces. In wall voids, inject enough foam to contact wood surfaces of studs in the wall, or the target area desired. Foam can be injected into galleries until runoff is observed from kick holes, or entry/exit holes.

#### Preventative treatment:

Application of **TIM-BOR Professional** solution, foam or powder will prevent infestation of wood termites, carpenter ants and the wood-boring beetles named above. Carpenter ants do not excavate treated surfaces, but may penetrate wood through untreated surfaces; this may be prevented by dusting wall voids, electrical and plumbing lines, cracks and crevices with **TIM-BOR Professional** powder. Eggs of wood-boring beetles laid on treated surfaces show reduced hatch rates; those larvae that do emerge die as they bore into the treated wood.

#### Remedial treatment:

**TIM-BOR Professional** from solutions and foams will penetrate dry wood down to 12 mm below treated surfaces. Carpenter ants may be controlled by application of powder to wall voids, electrical and plumbing lines, cracks and crevices. Established infestations of termites and carpenter ants at greater depths may be controlled by drilling and injection of **TIM-BOR Professional**. Beetle larvae at greater depths may not be immediately controlled by surface treatment, nor even by drilling and injection, but will eventually be killed by ingesting **TIM-BOR Professional** treated wood as they come to the surface to pupate.

#### General insect control:

**TIM-BOR Professional** powder may also be used as a crack and crevice and void treatment for control of cockroaches, silverfish and ants. **TIM-BOR Professional** may not be used for flea control. **TIM-BOR Professional** 15% aqueous solution may be used as a crack and crevice treatment only. Apply **TIM-BOR Professional** powder into wall voids and hiding places such as in cracks and crevices, moist areas, openings around pipes and sinks, under refrigerators, behind baseboards, coffee makers, meter boxes and manholes. Any powder visible after application must be brushed into cracks and crevices or removed. Apply only in areas inaccessible to children and pets. Avoid contamination of feed and foodstuffs. In food areas of food handling establishments, application of **TIM-BOR Professional** powder or 15% aqueous solution is limited to crack and crevice treatment only. Apply **TIM-BOR Professional** powder or 15% aqueous solution between different elements of construction, between equipment and floors, openings leading to voids and hollow spaces in walls, equipment legs and bases where insects hide. Care should be taken to avoid depositing the product onto exposed surfaces or introducing the material into the air. Avoid contamination of food or food processing surfaces. Do not use in serving areas when food is exposed.

APPLICATIONS OF THIS PRODUCT IN THE FOOD AREAS OF FOOD HANDLING ESTABLISHMENTS, OTHER THAN AS A CRACK AND CREVICE TREATMENT ARE NOT PERMITTED.

#### PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. May be harmful if swallowed. Avoid breathing the dust and contact with skin, eyes and clothing. Wear long-sleeved shirt, long pants, hat, eye goggles and chemical-resistant gloves during all activities with this product. Wear a dust/mist mask respirator when mixing and while spraying in enclosed spaces. Wash thoroughly after handling and before eating, drinking or smoking. Do not reuse empty container. Do not contaminate water, food or feed.

**ENVIRONMENTAL HAZARDS:** **TIM-BOR Professional** is toxic to certain aquatic life forms. Do not apply **TIM-BOR Professional** to any body of water. Do not contaminate water or wetland areas with application equipment rinsates or wash waters.

**FIRST AID INSTRUCTIONS:** If swallowed, drink a glass of water. Call physician or contact Poison Control Centre IMMEDIATELY. Take container, label, or product name and Pest Control Product Registration Number with you when seeking medical attention. If contact with eyes or skin occurs, rinse thoroughly with water. Consult a physician if irritation develops.

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

**NOTICE TO BUYER:** Seller's guarantee shall be limited to the term set out on the label and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

**TOXICOLOGICAL INFORMATION:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

**STORAGE:** Dry indoor storage is recommended. To minimize caking of the product, buckets should be handled on a first in, first out basis. Good housekeeping procedures should be followed to minimize dust generation and accumulation.

#### DISPOSAL:

1. Thoroughly empty the contents of the container into the application device.
2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

Manufactured by:  
U.S. Borax Inc. • 26877 Tourney Road • Valencia, CA 91355-1847  
P.O. Box 8090 London ON N6G 2B0



Distributed by:  
Nisus Corporation • 100 Nisus Drive • Rockford, TN 37853 USA  
www.nisuscorp.com

### 1 Chemical product and company identification

Product name: **Tim-bor Professional**  
Grade: Technical  
Product use: Termiticide, insecticide, fungicide  
Chemical formula:  $\text{Na}_2\text{B}_8\text{O}_{13}\cdot 4\text{H}_2\text{O}$   
Chemical name/synonyms: Disodium Octaborate Tetrahydrate  
Chemical family: Inorganic borates  
CAS registry number: 12280-03-4  
EPA pesticide Reg. No.: 1624-39  
(Refer to Section 15 for TSCA/DSL Chemical inventory listing)

**DISTRIBUTED BY:**  
Nisus Corporation  
100 Nisus Drive  
Rockford, TN 37853

**EMERGENCY PHONE NUMBERS:**  
24 Hr. Medical Info. Service . . . . (661) 284-5200  
Chemtec (Spills): . . . . . (800) 424-9300

### 2 Composition/information on ingredients

This product contains greater than 98 percent (%) disodium octaborate tetrahydrate,  $\text{Na}_2\text{B}_8\text{O}_{13}\cdot 4\text{H}_2\text{O}$ , which is hazardous under the OSHA Hazard Communication Standard and under the Canadian Controlled Products

Regulations of the Hazardous Products Act (WHMIS), based on animal chronic toxicity studies. Refer to Sections 3 and 11 for details on hazards.

### 3 Hazard identification

#### Emergency overview

**Tim-bor Professional** is a white, odourless, powder substance that is not flammable, combustible, or explosive and has low acute oral and dermal toxicity.

#### Potential ecological effects

Large amounts of **Tim-bor Professional** can be harmful to plants and other species. Therefore, releases to the environment should be minimized.

#### Potential health effects

**Routes of exposure:** Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because **Tim-bor Professional** is poorly absorbed through intact skin.

**Inhalation:** Occasional mild irritation effects to the nose and throat may occur from inhalation of **Tim-bor Professional** dust at levels greater than  $10 \text{ mg/m}^3$ .

**Eye contact:** **Tim-bor Professional** is non-irritating to the eyes in normal use.

**Skin contact:** **Tim-bor Professional** does not cause irritation to intact skin.

**Ingestion:** Products containing **Tim-bor Professional** are not intended for ingestion. **Tim-bor Professional** has a low

acute toxicity. Small amounts (e.g., a teaspoon) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

**Cancer:** **Tim-bor Professional** is not a known carcinogen.

**Reproductive/developmental:** Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects. A human study of occupational exposure to borate dust showed no adverse effect on reproduction.

**Target organs:** No target organ has been identified in humans. High dose animal ingestion studies indicate the testes are the target organs in male animals.

**Signs and symptoms of exposure:** Symptoms of accidental over-exposure to **Tim-bor Professional** might include nausea, vomiting and diarrhoea, with delayed effects of skin redness and peeling. These symptoms have been associated with the accidental over-exposure to the chemically related substance boric acid by ingestion or absorption through large areas of damaged skin.

Refer to Section 11 for details on toxicological data.

### 4 First aid measures

**Inhalation:** If symptoms such as nose or throat irritation are observed, remove person to fresh air.

**Eye contact:** Use eye wash fountain or fresh water to cleanse the eye. If irritation persists for more than 30 minutes, seek medical attention.

**Skin contact:** No treatment necessary because non-irritating.

**Ingestion:** Swallowing small quantities (one teaspoon) will cause no harm to healthy adults. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

**Note to physicians:** Observation only is required for adult ingestion in the range of 4-8 grams of **Tim-bor Professional**. For ingestion of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Haemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment. Refer to Section 11 for details.

## 5 Firefighting measures

**General hazard:** None, because *Tim-bor Professional* is not flammable, combustible or explosive. The product is itself a flame retardant.

**Extinguishing media:** Any fire extinguishing media may be used on nearby fires.

**Flammability classification (29 CFR 1910.1200):**  
Non-flammable solid.

## 6 Accidental release measures

**General:** *Tim-bor Professional* is a water-soluble white powder that may, at high concentrations, cause damage to trees or vegetation by root absorption. (Refer to Ecological information, Section 12, for specific information.)

**Land spill:** Vacuum, shovel or sweep up *Tim-bor Professional* and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during cleanup and disposal.

**Spillage into water:** Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level. (Refer to Sections 12, 13 and 15 for additional information.) *Tim-bor Professional* is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). (Refer to Regulatory information, Section 15, for additional references.)

## 7 Handling and storage

**General:** No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity and to minimize caking of the product, bags should be handled on a first-in, first-out basis. Good housekeeping procedures should be followed to minimize dust generation and accumulation.

**Storage temperature:** Ambient

**Storage pressure:** Atmospheric

**Special sensitivity:** Moisture (caking)

## 8 Exposure controls/personal protection

**Engineering controls:** Use local exhaust ventilation to keep airborne concentrations of *Tim-bor Professional* dust below permissible exposure levels.

**Personal protection:** Refer to label for actual regulatory personal protection requirements. Where airborne concentrations are expected to exceed exposure limits (e.g. confined spaces), NIOSH/MSHA certified respirators must be used. Eye protection, protective clothing and waterproof gloves may also be warranted under certain high exposure conditions.

**Occupational exposure limits:** Disodium octaborate tetrahydrate (*Tim-bor Professional*) is treated by OSHA, Cal OSHA and ACGIH as "Particulate Not Other wise Classified" or "Nuisance Dust".

<b>ACGIH/TLV:</b>	10 mg/m <sup>3</sup>
<b>Cal OSHA/PEL:</b>	10 mg/m <sup>3</sup>
<b>OSHA/PEL (total dust):</b>	15 mg/m <sup>3</sup>
<b>OSHA/PEL (respirable dust):</b>	5 mg/m <sup>3</sup>

## 9 Physical and chemical properties

<b>Appearance:</b>	White, odourless, powder
<b>Bulk density:</b>	320 to 480 kg/m <sup>3</sup>
<b>Vapour pressure:</b>	Negligible @ 20°C
<b>Solubility in water:</b>	9.7% @ 20°C; 34.3% @ 50°C

<b>Melting point:</b>	815°C
<b>pH @ 20°C:</b>	8.3 (3.0% solution) 7.6 (10.0% solution)
<b>Molecular weight:</b>	412.52

## 10 Stability and reactivity

**General:** *Tim-bor Professional* is a stable product.

**Incompatible materials and conditions to avoid:** Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosive hazard.

**Hazardous decomposition:** None.

## 11 Toxicological information

**Acute toxicity**

**Ingestion:** Low acute oral toxicity; LD<sub>50</sub> in rats is 2,550 mg/kg of body weight.

**Skin/dermal:** Low acute dermal toxicity; LD<sub>50</sub> in rabbits is greater than 2,000 mg/kg of body weight. **Tim-bor Professional** is poorly absorbed through intact skin.

**Inhalation:** Low acute inhalation toxicity; LC<sub>50</sub> in rats is greater than 2.0 mg/L (or g/m<sup>3</sup>).

**Skin irritation:** Non-irritant.

**Eye irritation:** Draize test in rabbits produced mild eye irritation effects. Years of occupational exposure to **Tim-bor Professional** indicates no adverse effects on human eye. Therefore **Tim-bor Professional** is not considered to be a human eye irritant in normal industrial use.

**Sensitization:** **Tim-bor Professional** is not a skin sensitizer.

#### **Other**

**Reproductive/developmental toxicity:** Animal feeding studies in rat, mouse and dog, at high doses, have

demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the foetus, including foetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed.

**Carcinogenicity/mutagenicity:** No evidence of carcinogenicity in mice. No mutagenic activity was observed for boric acid in a battery of short-term mutagenicity assays.

**Human data:** Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid dust and sodium borate dust. A recent epidemiology study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.

**Ecotoxicity data**

**General:** Boron (B) is the element in disodium octaborate tetrahydrate (*Tim-bor Professional*) which is used by convention to report borate product ecological effects. It occurs naturally in seawater at an average concentration of 5 mg B/L and generally occurs in freshwater at concentrations up to 1 mg B/L. In dilute aqueous solutions the predominant boron species present is undissociated boric acid. To convert disodium octaborate tetrahydrate into the equivalent boron (B) content, multiply by 0.2096.

**Phytotoxicity:** Boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to boron sensitive plants (e.g. grass and ornamentals) in high quantities. Care should be taken to minimize the amount of *Tim-bor Professional* accidentally spilled and released to the environment.

**Algal toxicity:**

Green algae, *Scenedesmus subspicatus*  
96-hr EC<sub>10</sub> = 24 mg B/L<sup>†</sup>

**Invertebrate toxicity:**

Daphnids, *Daphnia magna straus*  
24-hr EC<sub>50</sub> = 242 mg B/L

Test substance: Sodium tetraborate

**Fish toxicity:**

Seawater:

Dab, *Limanda limanda*  
96-hr LC<sub>50</sub> = 74 mg B/L

Freshwater:

Rainbow trout, *S. gairdneri* (embryo-larval stage)

24-day LC<sub>50</sub> = 88 mg B/L

32-day LC<sub>50</sub> = 54 mg B/L

Goldfish, *Carassius auratus* (embryo-larval stage)

7-day LC<sub>50</sub> = 65 mg B/L

3-day LC<sub>50</sub> = 71 mg B/L

**Environmental fate data**

**Persistence/degradation:** Boron is naturally occurring and ubiquitous in the environment. *Tim-bor Professional* decomposes in the environment to natural borate.

**Octanol/water partition coefficient:** No value. In aqueous solution disodium octaborate tetrahydrate is converted substantially into undissociated boric acid.

**Soil mobility:** *Tim-bor Professional* is soluble in water and is leachable through normal soil.

**Disposal guidance:** Small quantities of *Tim-bor Professional* can usually be disposed of at landfill sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Tonnage quantities of product should, if possible, be used for an appropriate application.

**RCRA (40 CFR 261):** *Tim-bor Professional* is not listed under any sections of the Federal Resource Conservation and Recovery Act (RCRA).

**NPRI (Canada):** *Tim-bor Professional* is not listed on the Canadian National Pollutant Release Inventory. Refer to Section 15 for additional regulatory information.

**DOT hazardous classification:** Disodium octaborate tetrahydrate (*Tim-bor Professional*) is not regulated by the U.S. Department of Transportation (DOT) and is therefore not considered a hazardous material/substance.

**TDG Canadian transportation:** Disodium octaborate tetrahydrate (*Tim-bor Professional*) is not regulated under Transportation of Dangerous Goods (TDG).

**International transportation:** Disodium octaborate tetrahydrate (*Tim-bor Professional*) has no UN Number, and is not regulated under international rail, road, water or air transport regulations.

**OSHA/Cal OSHA:** This MSDS document meets the requirements of both OSHA (29 CFR 1910.1200) and Cal OSHA (Title 8 CCR 5194 (g)) hazard communication standards. Refer to Section 8 for regulatory exposure limits.

**WHMIS classification:** Disodium octaborate tetrahydrate (*Tim-bor Professional*) is classified as Class D- Division 2A under Canadian WHMIS guidelines.

**FIFRA:** *Tim-bor Professional* is registered with the EPA (EPA Reg. No. 1624-39), in accordance with Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as a pesticide product. Refer to EPA approved product label for additional product hazard and precautionary information.

**Canadian PCP:** *Tim-bor Professional* is registered with Health Canada's Pest Management Regulatory Agency (PMRA) under the Pest Control Products Act (PCP) (PCP Reg. No. 24091).

**Chemical inventory listing:** Disodium octaborate tetrahydrate (*Tim-bor Professional*), 12280-03-4, appears on several chemical inventory lists (including the EPA TSCA inventory, Canadian DSL, European EINECS and Korean lists) under the CAS No. representing the anhydrous form of this inorganic salt.

<b>U.S. EPA TSCA Inventory</b>	12008-41-2
<b>Canadian DSL</b>	12008-41-2
<b>EINECS</b>	234-541-0
<b>South Korea</b>	9312-3213

**RCRA:** Disodium octaborate tetrahydrate is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act (RCRA) or regulations (40 CFR 261 et seq.).

**California Proposition 65:** Disodium octaborate tetrahydrate (*Tim-bor Professional*) is not listed on the Proposition 65 list of carcinogens or reproductive toxicants.

**Superfund:** CERCLA/SARA. Disodium octaborate tetrahydrate is not listed under CERCLA or its 1986 amendments, SARA, including substances listed under

Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65, Section 302 of SARA, Extremely Hazardous Substances, 42 USC 11002, 40 CFR 355, or the CERCLA Hazardous Substances list, 42 USC 9604, 40 CFR 302.

**Safe Drinking Water Act (SDWA):** Disodium octaborate tetrahydrate is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron compounds.

**Clean Water Act (CWA) (Federal Water Pollution Control Act):** 33 USC 1251 et seq.

- Disodium octaborate tetrahydrate (*Tim-bor Professional*) is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33 USC 1314.
- It is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 129.
- It is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.

**Canadian drinking water guideline:** An "Interim Maximum Acceptable Concentration" (IMAC) for boron is currently set at 5 mg B/L.

**IARC:** The International Agency for Research on Cancer (IARC) (a unit of the World Health Organization) does not list or categorize disodium octaborate tetrahydrate as a carcinogen.

**NTP Biennial Report on Carcinogens:** Disodium octaborate tetrahydrate is not listed.

**OSHA carcinogen:** Disodium octaborate tetrahydrate is not listed.

**Clean Air Act (Montreal Protocol):** *Tim-bor Professional* was not manufactured with and does not contain any Class I or Class II ozone depleting substances.

## 16 Other information

### References

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- Weir R J, Fisher R S, *Toxicol. Appl. Pharmacol.* **23**: 351-364 (1972).
- Fail et al., *Fund. Appl. Toxicol.* **17**: 225-239 (1991).
- Price et al., *J. Am. Coll. Toxicol.* **14**: (2), 173 (Abst. P-17) (1995).
- Murray F J, *Regul. Toxicol. Pharmacol.* (Dec. 1995).
- National Toxicology Program (NTP)—Toxicology and 7. carcinogenesis studies of boric acid in B6C3F<sub>1</sub> mice, Tech. Report Ser. No. 324, U.S. Dept. of Health and Human Services. NIH Publ. No. 88-2580 (1987).
- Whorton et al., *Occup. Environ. Med.* **51**: 761-767 (1994).
- Schöberl et al., *Tenside Surfactants Detergents* **25**: 99-107 (1988).
- Hugman S J, Mance G, Water Research Centre Report 616-M (1983).
- Butterwick L, de Oude N, Raymond K, *Ecotoxicol. Environ. Safety* **17**: 339-371 (1989).

For general information on the toxicology of inorganic borates, see Patty's Industrial Hygiene and Toxicology, 4th Ed. Vol. II, (1994), Chap. 42, Boron; ECETOC Tech. Report No. 63 (1995).

### Product label text hazard information:

Refer to EPA (United States) or PMRA (Canada) approved product specimen label for additional product hazard and precautionary information.



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