

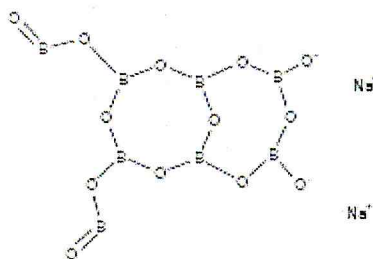


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DISODIUM OCTABORATE

CASRN: 12008-41-2



For more information, search the [NLM HSDB database](#).

Human Health Effects:

Toxicity Summary:

The inorganic borates display low acute toxicity. They are either not irritant or mild skin and eye irritants. They are not skin sensitizers, nor are they mutagenic or carcinogenic. The most sensitive endpoints of toxicity are considered to be effects on the reproductive organs, fertility in males, and developmental effects. The doses that cause these effects are far higher than any levels to which the human population could be exposed... /Inorganic borates/

[Hubbard SA, Sullivan FM; J Trace Elem Exptl Med 9 (4): 165-73 (1996)] **PEER REVIEWED**

Human Toxicity Excerpts:

/HUMAN EXPOSURE STUDIES/ ... Human volunteers were dosed with 10B-enriched boric acid, 5.0%, borax, 5.0%, or disodium octaborate tetrahydrate, 10%, in aqueous solutions. Urinalysis, for boron and changes in boron isotope ratios, was used to measure absorption. Boric acid in vivo percutaneous absorption was 0.226 (SD = 0.125) mean percentage dose, with flux and permeability constant (Kp) calculated at 0.009 ug/sq cm/hr and 1.9×10^{-7} cm/hr, respectively. Borax absorption was 0.210 (SD = 0.194) mean percentage of dose, with flux and Kp calculated at 0.009 ug/sq cm/hr and 1.8×10^{-7} cm/hr, respectively. DOT absorption was 0.122 (SD = 0.108) mean percentage, with flux and Kp calculated at 0.01 ug/sq cm/hr and 1.0×10^{-7} cm/hr, respectively. Pretreatment with the potential skin irritant 2% sodium lauryl sulfate had no effect on boron skin absorption. In vitro human skin percentage of doses of boric acid absorbed were 1.2 for a 0.05% solution, 0.28 for a 0.5% solution, and 0.70 for a 5.0% solution. These absorption amounts translated into flux values of, respectively, 0.25, 0.58, and 14.58 ug/sq cm/hr and permeability constants (Kp) of 5.0×10^{-4} , 1.2×10^{-4} , and 2.9×10^{-4} cm/hr for the 0.05, 0.5, and 5.0% solutions. The above in vitro doses were at infinite, 1000 uL/sq cm volume. At 2 uL/sq cm (the in vivo dosing volume), flux decreased some 200-fold to 0.07 ug/sq cm/hr and Kp of 1.4×10^{-6} cm/hr, while percentage of dose absorbed was 1.75%. Borax dosed at 5.0%/1000 uL/sq cm had 0.41% dose absorbed, flux at 8.5 ug/sq cm/hr, and Kp was 1.7×10^{-4} cm/hr. Disodium octaborate tetrahydrate (DOT) dosed at 10%/1000 uL/sq cm was 0.19% dose absorbed, flux at 7.9 ug/sq cm/hr, and Kp was 0.8×10^{-4} cm/hr. These in vitro results from infinite doses (1000 uL/sq cm) were 1000-fold greater than those obtained in the companion in vivo study. The results from the finite (2 uL/sq cm) dosing were closer (10-fold difference) to the in vivo results. General application of infinite dose percutaneous absorption values for risk assessment is questioned by these results. These in vivo results show that percutaneous absorption of boron, as boric acid, borax, and disodium octaborate tetrahydrate, through intact human skin, is low and is significantly less than the average daily dietary intake. This very low boron skin absorption makes it apparent that, for the borates tested, the use of gloves to prevent systemic uptake is unnecessary. These findings do not apply to abraded or otherwise damaged skin.

[Wester RC et al; Toxicol Sci 45 (1): 42-51 (1998)] **PEER REVIEWED** [PubMed Abstract](#)

/EPIDEMIOLOGY STUDIES/ A retrospective study showed that wives of workers from a borate mining and processing plant ... delivered somewhat more children than expected numbers, based on a national cohort. This result led investigators to conclude that borate exposure to workers had no deleterious effect on their reproductive health. Study provides useful epidemiological information, especially because testicular atrophy and subsequent male infertility had been observed in animal studies. Because of the limited scope of this study (live births as the sole endpoint), and limitations in design (birth rates compared to national norms, possibly inappropriate for a control population; exposures were only roughly estimated), this study does not substitute for a reproduction study in laboratory animals. ... This was an offshoot to the study performed to evaluate reproductive effects on male employees... The study on female employees also monitored the same endpoints:

numbers of live births and sex of offspring compared to the same national database. There were only 68 female participants in this study, thus very limited opportunity to identify treatment effects. Results were not remarkable. The study should be considered as useful epidemiological data, but more limited in statistical power than the corresponding data on male employees. Other limitations noted for the male employee study also apply here. /Inorganic borates/ [California Environmental Protection Agency/Department of Pesticide Regulation; Toxicology Data Review Summaries. Available from: <http://www.cdpr.ca.gov/docs/risk/toxsums/toxsumlist.htm> on Boric acid and Related Inorganic Borates as of March 20, 2009.] **PEER REVIEWED**

/BIOMONITORING/ A study was made at the U.S. Borax mine and production facility ... to correlate the blood and urine levels with occupational dust exposure. The result showed that even the employees exposed on the job had blood and urine levels within the range found in the general unexposed U.S. population. The body's control mechanisms, principally excretion through the kidneys, keep the body boron level within normal ranges. /Inorganic borates/ [European Commission, ESIS; IUCLID Dataset, disodium octaborate (12008-41-2) p 25 (2000 CD-ROM edition). Available from, as of March, 5 2009: <http://esis.jrc.ec.europa.eu/> **PEER REVIEWED**

Skin, Eye and Respiratory Irritations:

Causes moderate eye irritation /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Emergency Medical Treatment:

Emergency Medical Treatment:

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The following Overview, *** BORATES *** , is relevant for this HSDB record chemical.

Life Support:

- o This overview assumes that basic life support measures have been instituted.

Clinical Effects:

0.2.1 SUMMARY OF EXPOSURE

0.2.1.1 ACUTE EXPOSURE

- A) USES: Borates are used in medicated powders, lotions, soaps, mouthwash, toothpaste, astringents, eyewashes, and cosmetics. Also used as an antimicrobial to treat recurrent vulvovaginal candidiasis. Mixed with sugar, boric acid has been used as a cockroach killer.
- B) PHARMACOLOGY: Has some bacteriostatic activity.
- C) TOXICOLOGY: Boric acid is well absorbed through the gastrointestinal tract, open wounds, and serous cavities. Toxicity has been described following ingestion, parenteral injection, enemas, lavage of serous cavities, and dermal application to burned and abraded skin. Systemic toxicity is more likely to occur

following chronic or multiple exposures. Local tissue injury is due to caustic effects. The mechanism of systemic toxicity is unknown.

- D) EPIDEMIOLOGY: Exposure is not common and severe toxicity is rare. Severe and fatal poisonings have rarely been reported following acute ingestion of boric acid/borates, usually following repeated dermal application to abraded or burned skin, or with chronic ingestion.

E) WITH POISONING/EXPOSURE

- 1) MILD TO MODERATE TOXICITY: Nausea, vomiting, diarrhea, and skin erythema with subsequent desquamation are the most common effects from any route of exposure. Nausea and vomiting generally occur early, while dermatologic manifestations are delayed 3 to 5 days after exposure.
- 2) SEVERE TOXICITY: Dehydration, hypotension, CNS excitation or depression, lethargy, seizures, coma, acute renal failure, dysrhythmias, and metabolic acidosis have been reported in patients with severe toxicity.

0.2.3 VITAL SIGNS

0.2.3.1 ACUTE EXPOSURE

- A) Significant ingestions or dermal exposures can be associated with weak, rapid pulse, cyanosis and hypotension. The patient may present with hypothermia, hyperthermia or normal body temperature.

0.2.20 REPRODUCTIVE HAZARDS

- A) There is insufficient information concerning the reproductive effects of borates in humans. However, in 1 recent study of male workers exposed to boron, no unfavorable effects on reproductivity were observed. Adverse testicular effects and infertility have been reported in animals.
- B) There have been limited animal studies which suggest decreased ovulation, fetotoxicity and developmental defects may occur with very high exposure levels. Maternal toxicity was present in some studies.

0.2.22 GENOTOXICITY

- A) The ATSDR (US DHHS, 1992) has concluded from a review of available studies that genotoxicity as a result of boron exposure may not be a human health concern. There is insufficient information regarding genotoxic effects of borates in humans. Bacterial and limited mammalian assay results have been negative.

Laboratory:

- A) Monitor renal function tests, cardiovascular status, and fluid and electrolyte balance in symptomatic patients.
- B) Blood borate concentrations may be useful to establish the diagnosis of borate intoxication, though they are not readily available and unlikely to be valuable for acute care.

Treatment Overview:

0.4.2 ORAL EXPOSURE

A) SUPPORT

- 1) MANAGEMENT OF MILD TO MODERATE TOXICITY: Treatment is primarily supportive. Hydration, antiemetics, and electrolyte repletion are typically all that are required.
- 2) MANAGEMENT OF SEVERE TOXICITY: Supportive care with consideration of dialysis. For hypotension, infuse 10 to 20 mL/kg isotonic fluid. If hypotension persists, administer dopamine or norepinephrine; titrate to desired response. For seizures, administer a

benzodiazepine. Consider phenobarbital or propofol if seizures persist or recur.

B) DECONTAMINATION

- 1) PREHOSPITAL: Gastrointestinal decontamination is generally not recommended.
- 2) HOSPITAL: There are no studies that have evaluated the adsorption of borates to activated charcoal. As there is substantial gastrointestinal irritation and most patients will have spontaneous emesis, routine use of activated charcoal is not recommended.

C) AIRWAY MANAGEMENT

- 1) Ensure adequate ventilation and perform endotracheal intubation early in patients with significant CNS depression.

D) ANTIDOTE

- 1) There is no specific antidote.

E) ENHANCED ELIMINATION

- 1) Boric acid is removed by hemodialysis, with an extraction ratio of approximately 70%. Hemodialysis should be considered in patients with severe toxicity who are not responding to conventional therapy, or for the management of severe fluid-electrolyte abnormalities refractory to conventional management.

F) PATIENT DISPOSITION

- 1) HOME CRITERIA: Patients with inadvertent exposures with minimal symptoms may be observed at home.
- 2) OBSERVATION CRITERIA: Patients with deliberate exposure and those with more than mild symptoms (eg, persistent vomiting, CNS effects) should be referred to a healthcare facility for evaluation and treatment.
- 3) ADMISSION CRITERIA: All symptomatic patients showing evidence of systemic toxicity (ie, cardiovascular effects, acidosis, CNS effects) should be admitted.
- 4) CONSULT CRITERIA: Consult a medical toxicologist or local poison control center for patients with systemic toxicity or ongoing local tissue symptoms following borate exposure.

G) PITFALLS

- 1) Failing to recognize borate exposure as it is relatively rare, and failure to recognize that systemic poisoning may occur and produce delayed symptoms.

H) PHARMACOKINETICS

- 1) Boric acid is well absorbed through the gastrointestinal tract, open wounds, and serous cavities. After parenteral administration to animals, boric acid is distributed to all tissues, except the brain, within 30 minutes. Borates are primarily cleared unchanged by the kidney. The apparent elimination half-life is 5 to 10 hours.

I) DIFFERENTIAL DIAGNOSIS

- 1) Acutely, borate intoxication can appear similar to heavy metal ingestion.

0.4.3 INHALATION EXPOSURE

- A) Move patient to fresh air. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Administer oxygen and assist ventilation as required. Treat bronchospasm with inhaled beta-2 agonist. Observe for systemic effects and administer supportive treatment as necessary.

0.4.4 EYE EXPOSURE

- A) Irrigate exposed eyes with copious amounts of room temperature water for at least 15 minutes. If irritation, pain, swelling, lacrimation, or photophobia persist, the patient should be seen in a healthcare

facility.

0.4.5 DERMAL EXPOSURE

A) OVERVIEW

- 1) Remove contaminated clothing and wash exposed area thoroughly with soap and water. A physician may need to examine the area if irritation or pain persists. Observe for systemic effects which chiefly occur from chronic skin exposure, or application of borates to denuded skin.

Range of Toxicity:

- A) TOXICITY: The minimum lethal and maximum tolerated dose of ingested borates are not well established. There is wide variability in the response to borates. Fatalities occur more frequently in young children. Death has resulted from boric acid ingestions of 2 to 3 g in infants, 5 to 6 g in children, and 15 to 20 g in adults. There have also been reports of survival after an estimated 10 g ingested by a 2-year-old child, and an estimated 297 g ingested by an adult. There are 2.9 to 4.4 g of boric acid in 1 teaspoonful of 100% boric acid powder, crystals, or granules.

[Rumack BH POISINDEX(R) Information System Micromedex, Inc., Englewood, CO, 2017; CCIS Volume 172, edition expires May, 2017. Hall AH & Rumack BH (Eds): TOMES(R) Information System Micromedex, Inc., Englewood, CO, 2017; CCIS Volume 172, edition expires May, 2017.] **PEER REVIEWED**

Antidote and Emergency Treatment:

/SRP:/ Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Boron and Related Compounds/ [Currance, P.L. Clements, B., Bronstein, A.C. (Eds).; Emergency Care For Hazardous Materials Exposure. 3Rd edition, Elsevier Mosby, St. Louis, MO 2005, p. 473] **PEER REVIEWED**

/SRP:/ Basic treatment: Establish a patent airway (oropharyngeal or nasopharyngeal airway, if needed). Suction if necessary. Aggressive airway management may be necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary Monitor for shock and treat if necessary For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with 0.9% saline (NS) during transport Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal Cover skin burns with dry sterile dressing after decontamination /Boron and Related Compounds/ [Currance, P.L. Clements, B., Bronstein, A.C. (Eds).; Emergency Care For Hazardous Materials Exposure. 3Rd edition, Elsevier Mosby, St. Louis, MO 2005, p. 473-4] **PEER REVIEWED**

/SRP:/ Advanced treatment: Consider orotracheal or nasotracheal intubation for airway control in the patient who is unconscious, has severe pulmonary edema, or is in severe respiratory distress. Early intubation at the first sign of upper airway obstruction may be necessary. Positive-pressure ventilation techniques with a bag valve mask device may be beneficial. Consider drug therapy for pulmonary edema Monitor cardiac rhythm and treat arrhythmias if necessary Start IV administration of D5W /SRP: "To keep open", minimal flow rate/. Use 0.9% saline (NS) or lactated Ringer's (LR) if signs of hypovolemia are present. For hypotension with signs of hypovolemia, administer fluid cautiously. Consider vasopressors if patient is hypotensive with a normal fluid volume. Watch for signs of fluid overload Use proparacaine hydrochloride to assist eye irrigation /Boron and Related Compounds/ [Currance, P.L. Clements, B., Bronstein, A.C. (Eds).; Emergency Care For Hazardous Materials Exposure. 3Rd edition, Elsevier Mosby, St. Louis, MO 2005, p. 474] **PEER REVIEWED**

Animal Toxicity Studies:

Toxicity Summary:

The inorganic borates display low acute toxicity. They are either not irritant or mild skin and eye irritants. They are not skin sensitizers, nor are they mutagenic or carcinogenic. The most sensitive endpoints of toxicity are considered to be effects on the reproductive organs, fertility in males, and developmental effects. The doses that cause these effects are far higher than any levels to which the human population could be exposed... /Inorganic borates/ [Hubbard SA, Sullivan FM; J Trace Elem Exptl Med 9 (4): 165-73 (1996)] **PEER REVIEWED**

Non-Human Toxicity Excerpts:

/LABORATORY ANIMALS: Acute Exposure/ The material is classified as Toxicity Category IV by dermal administration. The primary irritation index (PII) was found to be 0.5 based on erythema and edema. No evidence of tissue damage was found. No irritation persisted 72 hours following application. No changes in the coloration or texture to the skin were noted. One rabbit only gave a score of 2 for erythema formation after 1/2 -1 hr, but all the other scores were 1 or 0 for both erythema and edema formation. Young adult rabbits (three male and three female) were used in this study. Each animal received 0.5 g of test material under a 1" x 1" gauze square. The material was applied to one intact skin site for 4 hrs, with observations of the site after 1, 24, 48, and 72 hrs.

[European Commission, ESIS; IUCLID Dataset, disodium octoborate (12008-41-2) p 23 (2000 CD-ROM edition). Available from, as of March, 5 2009: <http://esis.jrc.ec.europa.eu/> **PEER REVIEWED**

/LABORATORY ANIMALS: Acute Exposure/ Irritation scores in individual animals ranged from 0-19. No evidence of corrosion was noted. Changes noted were in the blistered appearance to the conjunctiva. The material is classified in Toxicity Category II by ocular administration (Corneal involvement or irritation clearing in 8-21 days). The test material produced iris and conjunctival irritation, when applied with rinsing to the eyes of six rabbits. The rinsing was done 24 hours after application.

[European Commission, ESIS; IUCLID Dataset, disodium octoborate (12008-41-2) p 23 (2000 CD-ROM edition). Available from, as of March, 5 2009: <http://esis.jrc.ec.europa.eu/> **PEER REVIEWED**

/LABORATORY ANIMALS: Developmental or Reproductive Toxicity/ The developing fetus is also sensitive to boric acid and its sodium salts at doses that do not produce direct maternal toxicity (e.g., maternal reductions in gravid weight or weight gains are secondary to fetal toxicity). Effects on the fetus include skeletal variations/malformations, visceral malformations, increased mortality and reduced pup weight. Visceral fetal abnormalities were also reported: enlarged lateral ventricles of the brain were observed in the rat and defects of the great vessels and the heart were observed in the rabbit. /Boric acid and sodium salts/

[USEPA/Office of Pesticide Programs; Boric Acid/Sodium Borate Salts: HED Chapter of the Tolerance Reassessment Eligibility Decision Document (TRED) p.11 EPA-HQ-OPP-2005-0062-0004 (January 2006). Available from, as of March 20, 2009: <http://www.regulations.gov> **PEER REVIEWED**

Non-Human Toxicity Values:

LD50 Guinea pig oral 5300 mg/kg /from table/

[National Library of Medicine, SIS; ChemIDplus Lite Record for Boron sodium oxide (12008-41-2). Available from, as of February 9, 2009: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp> **PEER REVIEWED**

LD50 Rat oral 2 g/kg /from table/

[National Library of Medicine, SIS; ChemIDplus Lite Record for Boron sodium oxide (12008-41-2). Available from, as of February 9, 2009: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp> **PEER REVIEWED**

LD50 Rabbit dermal /greater than/ 2000 mg/kg bw.

[European Commission, ESIS; IUCLID Dataset, disodium octoborate (12008-41-2) p 22 (2000 CD-ROM edition). Available from, as of March, 5 2009: <http://esis.jrc.ec.europa.eu/> **PEER REVIEWED**

Metabolism/Pharmacokinetics:**Absorption, Distribution & Excretion:**

Boric acid and borate salts exist as the undissociated acid in aqueous solution at physiological pH. No further metabolism occurs in either animals or plants. The compounds are therefore considered to be toxicologically similar and comparisons can be made based on boron equivalents (percentages used for conversion to boron equivalents are shown below in Table 3.1). In animals, boric acid/borate salts are essentially completely absorbed following oral ingestion. Absorption occurs via inhalation, although quantitative data are unavailable. Limited data indicate that boric acid/salts are not absorbed through intact skin to any significant extent, although absorption occurs through skin that is severely abraded. It distributes throughout the body and is not retained in tissues, except for bone, and is rapidly excreted in the urine. Boron equivalent /for/ ...Disodium octaborate 25.38%.

[USEPA/Office of Pesticide Programs; Boric Acid/Sodium Borate Salts: HED Chapter of the Tolerance Reassessment Eligibility Decision Document (TRED) p.11 EPA-HQ-OPP-2005-0062-0004 (January 2006). Available from, as of March 13, 2009: <http://www.regulations.gov> **PEER REVIEWED**

... Human volunteers were dosed with 10B-enriched boric acid, 5.0%, borax, 5.0%, or disodium octaborate tetrahydrate, 10%, in aqueous solutions. Urinalysis, for boron and changes in boron isotope ratios, was used to measure absorption. Boric acid in vivo percutaneous absorption was 0.226 (SD = 0.125) mean percentage dose, with flux and permeability constant (Kp) calculated at 0.009 ug/sq cm/hr and 1.9 x 10⁻⁷ cm/hr, respectively. Borax absorption was 0.210 (SD = 0.194) mean percentage of dose, with flux and Kp calculated at 0.009 ug/sq cm/hr and 1.8 x 10⁻⁷ cm/hr, respectively. DOT absorption was 0.122 (SD = 0.108) mean percentage, with flux and Kp calculated at 0.01 ug/sq cm/hr and 1.0 x 10⁻⁷ cm/hr, respectively. Pretreatment with the potential skin irritant 2% sodium lauryl sulfate had no effect on boron skin absorption. In vitro human skin percentage of doses of boric acid absorbed were 1.2 for a 0.05% solution, 0.28 for a 0.5% solution, and 0.70 for a 5.0% solution. These absorption amounts translated into flux values of, respectively, 0.25, 0.58, and 14.58 ug/sq cm/hr and permeability constants (Kp) of 5.0 x 10⁻⁴, 1.2 x 10⁻⁴, and 2.9 x 10⁻⁴ cm/hr for the 0.05, 0.5, and 5.0% solutions. The above in vitro doses were at infinite, 1000 uL/sq cm volume. At 2 uL/sq cm (the in vivo dosing volume), flux decreased some 200-fold to 0.07 ug/sq cm/hr and Kp of 1.4 x 10⁻⁶ cm/hr, while percentage of dose absorbed was 1.75%. Borax dosed at 5.0%/1000 uL/sq cm had 0.41% dose absorbed, flux at 8.5 ug/sq cm/hr, and Kp was 1.7 x 10⁻⁴ cm/hr. Disodium octaborate tetrahydrate (DOT) dosed at 10%/1000 uL/sq cm was 0.19% dose absorbed, flux at 7.9 ug/sq cm/hr, and Kp was 0.8 x 10⁻⁴ cm/hr. These in vitro results from infinite doses (1000 uL/sq cm) were 1000-fold greater than those obtained in the

companion in vivo study. The results from the finite (2 uL/sq cm) dosing were closer (10-fold difference) to the in vivo results. General application of infinite dose percutaneous absorption values for risk assessment is questioned by these results. These in vivo results show that percutaneous absorption of boron, as boric acid, borax, and disodium octaborate tetrahydrate, through intact human skin, is low and is significantly less than the average daily dietary intake. This very low boron skin absorption makes it apparent that, for the borates tested, the use of gloves to prevent systemic uptake is unnecessary. These findings do not apply to abraded or otherwise damaged skin.

[Wester RC et al; Toxicol Sci 45 (1): 42-51 (1998)] **PEER REVIEWED** [PubMed Abstract](#)

Pharmacology:

Environmental Fate & Exposure:

Environmental Standards & Regulations:

FIFRA Requirements:

An exemption from the requirement of a tolerance is established for residues of the pesticidal chemical boric acid and its salts, borax (sodium borate decahydrate), disodium octaborate tetrahydrate, boric oxide (boric anhydride), sodium borate and sodium metaborate, in or on raw agricultural commodities when used as an active ingredient in insecticides, herbicides, or fungicides preharvest or postharvest in accordance with good agricultural practices. /Disodium octaborate tetrahydrate/ [40 CFR 180.1121 (USEPA); U.S. National Archives and Records Administration's Electronic Code of Federal Regulations. Available from, as of March 11, 2009: <http://www.ecfr.gov> **PEER REVIEWED**

The Agency has reassessed the current exemptions from the requirement for tolerances from boric acid/sodium borate salts ... As a result of this assessment, the Agency determined that the active tolerances exemptions should be maintained and are considered reassessed as safe under section 408(q) of the FFDCA. It should be noted however that the higher application rates for the swimming pool uses resulted in residential post-application scenarios which exceed the Agency's LOC. The high rates for these pool and spa uses must be deleted from the end-use product labels. Registrants have agreed to amend their labels by removing the higher application rates to Agency acceptable levels.

[USEPA/Office of Pesticide Programs; Report of the Food Quality Protection Act (FQPA) Tolerance Reassessment Progress and Risk Management Decision (TRED) for Boric Acid/Sodium Borate Salts p.11 (July 2006). Available from, as of March 14, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm> **PEER REVIEWED**

Based on the reviews of the generic data for the active ingredients of boric acid and its sodium salts, the Agency has sufficient information on the health effects of boric acid and its sodium salts and their potential for causing adverse effects in fish and wildlife and the environment. Therefore, the Agency concludes that products containing boric acid and its sodium salts for all uses are eligible for reregistration. The Agency has determined that boric acid and its sodium salts, labeled and used as specified in this RED (Reregistration Eligibility Decision) document, will not pose unreasonable risks or adverse effects to humans or the environment.

[USEPA/Office of Pesticide Programs; Reregistration Eligibility Decision Document - Boric Acid and its Sodium Salts p.34 (September 1993). Available from, as of March 13, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm> **PEER REVIEWED**

As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their continued use. Under this pesticide reregistration program, EPA examines newer health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether the use of the pesticide does not pose unreasonable risk in accordance to newer safety standards, such as those described in the Food Quality Protection Act of 1996. Disodium octaborate tetrahydrate (PC Code: 011107) is found on List A, which contains most pesticides that are used on foods and, hence, have a high potential for human exposure. List A consists of the 194 chemical cases (or 350 individual active ingredients) for which EPA issued registration standards prior to FIFRA '88. Case No: 0024; Pesticide type: insecticide, fungicide, herbicide; Registration Standard Date: 11/01/85; Case Status: RED Approved 9/93; OPP has made a decision that some/all uses of the pesticide are eligible for reregistration, as reflected in a Reregistration Eligibility Decision (RED) document .; Active ingredient (AI): disodium octaborate tetrahydrate (PC Code: 011107); Data Call-in (DCI) Date(s): 2/16/94; AI Status: OPP has completed a Reregistration Eligibility Decision (RED) for the case/AI.

[United States Environmental Protection Agency/ Prevention, Pesticides and Toxic Substances; Status of Pesticides in Registration, Reregistration, and Special Review. (1998) EPA 738-R-98-002, p. 91] **PEER REVIEWED**

Allowable Tolerances:

An exemption from the requirement of a tolerance is established for residues of the pesticidal chemical boric acid and its salts, borax (sodium borate decahydrate), disodium octaborate tetrahydrate, boric oxide (boric anhydride), sodium borate and sodium metaborate, in or on raw agricultural commodities when used as an active ingredient in insecticides, herbicides, or fungicides preharvest or postharvest in accordance with good agricultural practices. /Disodium octaborate tetrahydrate/ [40 CFR 180.1121 (USEPA); U.S. National Archives and Records Administration's Electronic Code of Federal Regulations. Available from, as of March 11, 2009: <http://www.ecfr.gov> **PEER REVIEWED**

Chemical/Physical Properties:

Molecular Formula:

B8-Na2-O13

[National Library of Medicine, SIS; ChemIDplus Lite Record for Boron sodium oxide (12008-41-2). Available from, as of February 9, 2009: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp> **PEER REVIEWED**

Color/Form:

Crystalline rod

[USEPA/Office of Pesticide Programs; Reregistration Eligibility Decision Document - Boric Acid and its Sodium Salts p.15 (September 1993). Available from, as of March 13, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm> **PEER REVIEWED**

Other Chemical/Physical Properties:

A commercial product having the hypothetical formula Na₂B₈O₁₃·4H₂O ... not a discrete crystalline compound but rather an amorphous spray-dried material having an approximate composition in agreement with ... chemical formula. It has little crystalline character and dissolves rapidly in water without the temperature decrease that normally occurs when crystalline sodium borates are dissolved. ... readily forms supersaturated solutions in hot water /Disodium octaborate tetrahydrate/ [Schubert DM, Brotherton; Encyclopedia of Inorganic Chemistry. (2006). NY, NY: John Wiley & Sons; Boron: Inorganic Chemistry. Online Posting Date: Mar 15, 2006.] **PEER REVIEWED**

Amorphous solid ... easily dissolved in cold water to give supersaturated solutions of considerable concentration. ... In aqueous solution the pH decreases with concentration. /Disodium octaborate tetrahydrate/

[Smith RA; Ullmann's Encyclopedia of Industrial Chemistry. 7th ed. (2008). NY, NY: John Wiley & Sons; Boric Oxide, Boric Acid, and Borates. Online Posting Date: Jun 15, 2000.] **PEER REVIEWED**

Dissolves rapidly in water ... easily forms viscous supersaturated solutions at elevated temperatures. Solubility at 30 degC: 21.9wt % /Disodium octaborate tetrahydrate/

[Briggs M; Kirk-Othmer Encyclopedia of Chemical Technology. (2001). NY, NY: John Wiley & Sons; Boron Oxides, Boric Acid, and Borates. Online Posting Date: July 13, 2001.] **PEER REVIEWED**

Solubility: 9.5 g/100 g water /Disodium octaborate tetrahydrate/

[Scherer HW et al; Ullmann's Encyclopedia of Industrial Chemistry. 7th ed. (2008). NY, NY: John Wiley & Sons; Fertilizers. Online Posting Date: Dec 15, 2006.] **PEER REVIEWED**

Chemical Safety & Handling:

Skin, Eye and Respiratory Irritations:

Causes moderate eye irritation /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Toxic Combustion Products:

Do not burn pressure-treated wood in open fires or in stoves, fireplaces or residential boilers because toxic substances may be produced as part of the smoke and ashes.

[USEPA; Chromated Copper Arsenate (CCA): Safety and Precautions When Working With CCA Alternatives. Available from, as of March, 10 2009: <http://www.epa.gov/oppad001/reregistration/cca/safety precautions.htm> **PEER REVIEWED**

Protective Equipment & Clothing:

Mixers/loaders, applicators and other handlers must wear: long-sleeve shirt and long pants, shoes plus socks, protective eyewear, chemical resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton) and a respirator with a dust, fume, mist removing cartridge in accordance with NIOSH Guidelines; 42 CFR Part 84, when occupational exposure limits are exceeded. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Wear a dust mask, gloves, and goggles when cutting or handling treated or untreated wood. Whenever possible perform these operations outdoors to avoid indoor accumulations or airborne sawdust.

[USEPA; Chromated Copper Arsenate (CCA): Safety and Precautions When Working With CCA Alternatives. Available from, as of March, 10 2009: <http://www.epa.gov/oppad001/reregistration/cca/safety precautions.htm> **PEER REVIEWED**

Preventive Measures:

SRP: The scientific literature for the use of contact lenses in industry is conflicting. The benefit or detrimental effects of wearing contact lenses depend not only upon the substance, but also on factors including the form of the substance, characteristics and duration of the exposure, the uses of other eye protection equipment, and the hygiene of the lenses. However, there may be individual substances whose irritating or corrosive properties are such that the wearing of contact

lenses would be harmful to the eye. In those specific cases, contact lenses should not be worn. In any event, the usual eye protection equipment should be worn even when contact lenses are in place. /Disodium octaborate tetrahydrate/
PEER REVIEWED

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

SRP: Contaminated protective clothing should be segregated in such a manner so that there is no direct personal contact by personnel who handle, dispose, or clean the clothing. Quality assurance to ascertain the completeness of the cleaning procedures should be implemented before the decontaminated protective clothing is returned for reuse by the workers. Contaminated clothing should not be taken home at end of shift, but should remain at employee's place of work for cleaning.
PEER REVIEWED

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Users should remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible wash thoroughly. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Solutions carelessly spilled or applied to cropland or growing plants may kill or seriously retard plant growth. This pesticide is toxic to fish and wildlife. Do not contaminate water by cleaning of equipment or disposal of wastes. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

After working with wood, wash exposed skin thoroughly.

[USEPA; Chromated Copper Arsenate (CCA): Safety and Precautions When Working With CCA Alternatives. Available from, as of March, 10 2009: <http://www.epa.gov/opad001/reregistration/cca/safety precautions.htm> **PEER REVIEWED**

Storage Conditions:

Do not contaminate water, food or feed by pesticide storage and disposal. Store in a dry place. Do not store where children or animals may gain access. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Disposal Methods:

SRP: The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational exposure or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal, aquatic, and plant life; and conformance with environmental and public health regulations.
PEER REVIEWED

Pesticide disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. /98% Disodium octaborate tetrahydrate/

[USEPA; Pesticide Product Label System (PPLS): Search the Pesticide Product Label System for Company No. 1624 and Product No 39. Database query page Available from, as of March 17, 2009: <http://oaspub.epa.gov/pestlabl/ppls.home> **PEER REVIEWED**

Occupational Exposure Standards:

Manufacturing/Use Information:

Uses:

For disodium octaborate (USEPA/OPP Pesticide Code: 011107) ACTIVE products with label matches. /SRP: Registered for use in the U.S. but approved pesticide uses may change periodically and so federal, state and local authorities must be consulted for currently approved uses./

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium Octaborate (12008-41-2). Available from, as of March 13, 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

For disodium octaborate tetrahydrate (USEPA/OPP Pesticide Code: 011103) ACTIVE products with label matches. /SRP: Registered for use in the U.S. but approved pesticide uses may change periodically and so federal, state and local authorities must be consulted for currently approved uses. /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium Octaborate Tetrahydrate (12280-03-4). Available from, as of March 14, 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Used to prevent and control decay fungi in lumber and timber products.

[USEPA/Office of Pesticide Programs; Reregistration Eligibility Decision Document - Boric Acid and its Sodium Salts p.14 (September 1993). Available from, as of March 13, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm> **PEER REVIEWED**

Multimicronutrient fertilizer /Disodium octaborate tetrahydrate/

[Scherer HW et al; Ullmann's Encyclopedia of Industrial Chemistry. 7th ed. (2008). NY, NY: John Wiley & Sons; Fertilizers. Online Posting Date: Dec 15, 2006.] **PEER REVIEWED**

As a boron source in agriculture, a diffusible wood preservative, a flame retardant for cellulosic materials, and for the control of insect pests /Disodium octaborate tetrahydrate/

[Schubert DM, Brotherton; Encyclopedia of Inorganic Chemistry. (2006). NY, NY: John Wiley & Sons; Boron: Inorganic Chemistry. Online Posting Date: Mar 15, 2006.] **PEER REVIEWED**

Inert ingredient in pesticide products

[USEPA; Inert Ingredients Permitted for Use in Nonfood Use Pesticide Products. Last Updated January 27, 2009. Available from, as of Mar 9, 2009: http://www.epa.gov/oppr001/inerts/inert_nonfooduse.pdf **PEER REVIEWED**

Insecticide, herbicide /Disodium octaborate tetrahydrate/

[PAN Pesticides Database; California Pesticide Use. Disodium octaborate tetrahydrate. Available from, as of Mar 12, 2009: http://www.pesticideinfo.org/DetailChemUse.jsp?Rec_Id=PC35343 **PEER REVIEWED**

Disodium Octaborate Tetrahydrate (DOT) is specially formulated for use as a water-based wood preservative - delivering the highest concentration of boron (maximum water solubility and rate of dissolution) at a near-neutral pH. /Disodium octaborate tetrahydrate/

[USEPA; Chromated Copper Arsenate (CCA): Borates - An Alternative to CCA. Available from, as of March 13, 2009: <http://www.epa.gov/opad001/reregistration/cca/borates.htm> **PEER REVIEWED**

Manufacturers:

InCide Technologies, Inc., 50 North 41st Avenue, Phoenix, AZ 85009, (602) 233-0756; Production site: Phoenix, AZ 85009

/Disodium octaborate tetrahydrate/

[SRI Consulting. 2008 Directory of Chemical Producers United States. Menlo Park, CA 2008, p. 539] **PEER REVIEWED**

Rio Tinto Minerals, 26877 Tourney Rd., Vlanecia, CA 91355-1847, (661) 287-5400; Production site: Wilmington, CA 90744

/Disodium octaborate tetrahydrate/

[SRI Consulting. 2008 Directory of Chemical Producers United States. Menlo Park, CA 2008, p. 539] **PEER REVIEWED**

Viance, LLC, One Woodlawn Green, Suite 350, Charlotte, NC 28217 /Pesticide formulator/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

U.S. Borax Inc., PO Box 6609, Englewood, CO 80155 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

OSMOSE Inc., 980 Ellicott St., Buffalo, NY 14209 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Waterbury Companies Inc., 129 Calhoun Street, Independence, LA 70443 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Copper Brite, Inc., PO Box 50610, Santa Barbara, CA 93150 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Chemical Specialties, Inc., One Woodlawn Green, Charlotte, NC 28217 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Drexel Chemical Company, 1700 Channel Avenue, Memphis, TN 38113 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Honolulu Wood Treating Co., 91-291 Hanua Street, Kapolei, HI 96707 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Schirm USA, Inc., PO Box 237, Ennis, TX 75120 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

In-Cide Technologies, Inc., 50 N. 41 Avenue, Suite #2, Phoenix, AZ 85009 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Perma-Chink Systems Inc., 17635 N.E. 67th Ct., Redmond, WA 98052 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

NISUS Corp., 100 Nisus Drive, Rockford, TN 37853 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Searles Valley Minerals Operations Inc., 13200 Main Street, Trona, CA 93592 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Sashco Incorporated, 10300 East 107th Place, Brighton, CO 80601 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

The Ecology Works, Inc., PO Box 187, Hobe Sound, FL 33475 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Quality Borate Co., 3690 Orange Place, Ste. 495 Cleveland, OH 44122 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Genics Inc., #561 Acheson Rd., 53016 Hwy 60, Acheson, Alberta, Canada T7X 5A7 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Sostram Corporation, 300 Colonial Center Parkway, Suite 230, Roswell, GA 30076 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Mold Free, Inc., 9601 Wilshire Boulevard, Suite 620, Beverly Hills, CA 90210 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Kai R. Spangenberg, EFTS I/S Storehaven 7B, DK-7100 VEJLE /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Innovative Pest Control Products, PO Box 880216, Boca Raton, FL 33488 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Arch Wood Protection Canada Corp., 2000 Argentia Way, Plaza 4, Suite 308, Mississauga, Ontario L5N 1V9, Canada /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Preservabalance, Incorporated, 850 W. Chambers Street, Eloy, AZ 85231 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Turf Science Laboratories, Inc., 970 Park Center Drive, Suite C-Vista, CA 92081 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Ares S.P.A.-Prodottie Minerali, C/O GTI, PO Box 1269, Madison, NJ 07940 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Wood Treatment Products, Inc., 197 Meadow Beauty Terrace, Sanford, FL 32771 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Ensysyex II, Inc., PO Box 87329, Fayetteville, NC 28304 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

C & E, Inc., 9601 Wilshire Boulevard, Suite 620, Beverly Hills, CA 90210 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Environmental Resource Technologies, LLC, 824 West Riverview Drive, Suffolk, VA 23434 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Termarid, LLC, 434 North Main Street, Suite A, Suffolk, VA 23434 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

NISSUS Corporation, 2115 Frank Bird Boulevard, Rockford, TN 37853 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Green Star Group, LTD., 3521 Oak Lawn, Dallas, TX 75219 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Diversified Coatings, Inc. 620 Lamar Street Los Angeles, CA 90031 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Sungro Products, LLC, 810 E. 18th Street, Los Angeles, CA 90021 /Pesticide formulator/ /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Wood Tec Inc., 721 Kirkland Avenue, Woodlinville, WA 98072 /Pesticide formulator/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

General Manufacturing Information:

Disodium octaborate is not a homogenous substance. It has a Na₂O:B₂O₃ ratio of 1:4 and can be produced as a concentrated solution.

[Scherer HW et al; Ullmann's Encyclopedia of Industrial Chemistry. 7th ed. (2008). NY, NY: John Wiley & Sons; Fertilizers. Online Posting Date: Dec 15, 2006.] **PEER REVIEWED**

Marketed under various trade names depending on intended use /Disodium octaborate tetrahydrate/

[Schubert DM, Brotherton; Encyclopedia of Inorganic Chemistry. (2006). NY, NY: John Wiley & Sons; Boron: Inorganic Chemistry. Online Posting Date: Mar 15, 2006.] **PEER REVIEWED**

... low toxicity alternative for protecting timber and composites from wood destroying organisms such as decay fungi and termites. ... proven effective for more than 70 years in residential and commercial construction, ... efficacy is backed by extensive field testing. /Disodium Octaborate Tetrahydrate/

[US EPA; Chromated Copper Arsenate (CCA): Borates - An Alternative to CCA. Available from, as of Mar 12, 2009: <http://www.epa.gov/oppad001/reregistration/cca/borates.htm> **PEER REVIEWED**

Formulations/Preparations:

Soluble concentrate/liquid 40%; soluble concentrate/solid 99.4% /Disodium octaborate tetrahydrate/

[USEPA/Office of Pesticide Programs; Reregistration Eligibility Decision Document - Boric Acid and its Sodium Salts p.13 (September 1993). Available from, as of March 13, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm> **PEER REVIEWED**

... specially formulated as a water-based wood preservative /Disodium Octaborate Tetrahydrate/

[US EPA; Chromated Copper Arsenate (CCA): Borates - An Alternative to CCA. Available from, as of Mar 12, 2009: <http://www.epa.gov/oppad001/reregistration/cca/borates.htm> **PEER REVIEWED**

BOR-RODS; Active ingredient 96.65% Boron sodium oxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Cobra Rod; Active ingredients 4.70% Boric acid, 90.60% Boron sodium oxide and 2.90% Copper hydroxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Genics CUB; Active ingredients 0.86% Boric acid, 8.80% Boron sodium oxide and 0.96% Copper hydroxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

IMPEL RODS; Active ingredient 100.00% Boron sodium oxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

POLYBOR 3; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

TIM-BOR; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

OCTABOR Manufacturing Grade; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

TIM-BOR Professional; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

OSMOSE Wood-BOR; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Disodium Octaborate Tetrahydrate; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

MOP UP; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Termite Prufe; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Termite Prufe Ready to Use; Active ingredient 10.74% Boron Sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Timbersaver; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Lum-Bor; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Drexel Lum-Bor Technical; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Clear-Bor F.T.; Active ingredient 10.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Finicide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Finicide IPC; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Finacide LQ; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Board Defense; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Shell-Guard; Active ingredient 25.31% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Armor-Guard; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Arbortech Manufacturing Use Only; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Armor-Guard Industrial; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Shellguard Ready-to-use (RTU) Wood Preservative/ Insect Control; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bora-Care; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bora-Care Manufacturing Concentrate; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bora-Care Injectable Concentrate; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

RTU Wood Preservative/ Insecticide; Active ingredient 8.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

RTU Flea Spray; Active ingredient 8.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

NIBOR Borate Insecticide and Fungicide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Three Elephant Disodium Octaborate Tetrahydrate Technical; Active ingredient 99.98% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

CORE; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Ecology Works Insecticide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Pestbor; Active ingredient 98.00% Boron Sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borasol-WP; Active ingredient 98.00% Borate sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Boradol Liquid; Active ingredient; 50.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Cobra Crush MDT; Active ingredients 7.90% Boric acid, 80.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Genics Gel Wrap; Active ingredients 0.85% Boric Acid, 8.65% Boron sodium oxide tetrahydrate and 0.94% Copper hydroxide /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bor-Ram; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Moldwash Wood Preservative/ Mold control; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Molwash Pre-Moistened Wipes; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Boracol 20-2; Active ingredient 19.60% Boron Sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Gourmet Ant Bait Gel; Active ingredient 6.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Gourmet Liquid Ant Bait; Active ingredient 1.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

T-2154 F-2 Concentrate; Active ingredients 16.67% Boron sodium oxide tetrahydrate and 11.42% Didecyl dimethyl ammonium chloride /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Preservabalance; 99.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Environtech WP; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Disodium Octaborate Tetrahydrate; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Disodium Octaborate Tetrahydrate; Active ingredient 99.98% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor; Active ingredient 99.98% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor Max; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor Plus; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor Max PT; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bluewater; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Term-A-Rid 613 Woodstakes; Active ingredient 0.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Term-A-Rid 613 Borate Treated Wood Chips; Active ingredient 0.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

GB-40; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Uncle Albert's Super Smart Ant Bait; Active ingredient 1.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

X-Mold!; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

MGuard; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

M7 Roach Killer Mop-on Insecticide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Laboratory Methods:

Special References:

Special Reports:

USEPA/Office of Pesticide Programs; Reregistration Eligibility Decision Document - Boric Acid and Its Sodium Salts September (2003). The RED summarizes the risk assessment conclusions and outlines any risk reduction measures necessary for the pesticide to continue to be registered in the U.S.

[Available from, as of March 14, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm>

USEPA/Office of Pesticide Programs; Report of the Food Quality Protection Act (FQPA) Tolerance Reassessment Progress and Risk Management Decision (TRED) for Boric Acid/Sodium Borate Salts (July 2006). EPA issues a TRED for a pesticide that requires tolerance reassessment decisions, but does not require a reregistration eligibility decision at present because: the pesticide was initially registered after November 1, 1984, and by law is not included within the scope of the reregistration program; EPA completed a RED for the pesticide before FQPA was enacted on August 3, 1996; or the pesticide is not registered for use in the U.S. but tolerances are established that allow crops treated with the pesticide to be imported from other countries.

[Available from, as of March 14, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm>

European Commission, ESIS; IUCLID Dataset, disodium octaborate (12008-41-2) (2000 CD-ROM edition).

[Available from, as of March 5, 2009: <http://esis.jrc.ec.europa.eu/>

Synonyms and Identifiers:

Related HSDB Records:

[1432 \[BORIC ACID\] analog](#)

Synonyms:

Boric acid (H2B8O13), disodium salt

PEER REVIEWED

Boron sodium oxide (Na2B8O13)

PEER REVIEWED

USEPA/OPP Pesticide Code: 011107

PEER REVIEWED

Associated Chemicals:

Disodium octaborate tetrahydrate; 12280-03-4

Formulations/Preparations:

Soluble concentrate/liquid 40%; soluble concentrate/solid 99.4% /Disodium octaborate tetrahydrate/

[USEPA/Office of Pesticide Programs; Reregistration Eligibility Decision Document - Boric Acid and its Sodium Salts p.13 (September 1993).

Available from, as of March 13, 2009: <http://www.epa.gov/pesticides/reregistration/status.htm> **PEER REVIEWED**

... specially formulated as a water-based wood preservative /Disodium Octaborate Tetrahydrate/

[US EPA; Chromated Copper Arsenate (CCA): Borates - An Alternative to CCA. Available from, as of Mar 12, 2009:

<http://www.epa.gov/opad001/reregistration/cca/borates.htm> **PEER REVIEWED**

BOR-RODS; Active ingredient 96.65% Boron sodium oxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Cobra Rod; Active ingredients 4.70% Boric acid, 90.60% Boron sodium oxide and 2.90% Copper hydroxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Genics CUB; Active ingredients 0.86% Boric acid, 8.80% Boron sodium oxide and 0.96% Copper hydroxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

IMPEL RODS; Active ingredient 100.00% Boron sodium oxide

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate (12008-41-2). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

POLYBOR 3; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

TIM-BOR; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

OCTABOR Manufacturing Grade; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

TIM-BOR Professional; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

OSMOSE Wood-BOR; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Disodium Octaborate Tetrahydrate; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

MOP UP; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Termite Prufe; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Termite Prufe Ready to Use; Active ingredient 10.74% Boron Sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Timbersaver; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Lum-Bor; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Drexel Lum-Bor Technical; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Clear-Bor F.T.; Active ingredient 10.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Finicide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Finicide IPC; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Finicide LQ; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Board Defense; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Shell-Guard; Active ingredient 25.31% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Armor-Guard; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Arbortech Manufacturing Use Only; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Armor-Guard Industrial; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Shellguard Ready-to-use (RTU) Wood Preservative/ Insect Control; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bora-Care; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bora-Care Manufacturing Concentrate; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bora-Care Injectable Concentrate; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

RTU Wood Preservative/ Insecticide; Active ingredient 8.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

RTU Flea Spray; Active ingredient 8.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4).
Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

NIBOR Borate Insecticide and Fungicide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Three Elephant Disodium Octaborate Tetrahydrate Technical; Active ingredient 99.98% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

CORE; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Ecology Works Insecticide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Pestbor; Active ingredient 98.00% Boron Sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borazol-WP; Active ingredient 98.00% Borate sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borazol Liquid; Active ingredient; 50.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Cobra Crush MDT; Active ingredients 7.90% Boric acid, 80.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Genics Gel Wrap; Active ingredients 0.85% Boric Acid, 8.65% Boron sodium oxide tetrahydrate and 0.94% Copper hydroxide /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bor-Ram; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Moldwash Wood Preservative/ Mold control; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Molwash Pre-Moistened Wipes; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Boracol 20-2; Active ingredient 19.60% Boron Sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Gourmet Ant Bait Gel; Active ingredient 6.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Gourmet Liquid Ant Bait; Active ingredient 1.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

T-2154 F-2 Concentrate; Active ingredients 16.67% Boron sodium oxide tetrahydrate and 11.42% Didecyl dimethyl ammonium chloride /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Preservabalance; 99.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Envirotech WP; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Disodium Octaborate Tetrahydrate; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Disodium Octaborate Tetrahydrate; Active ingredient 99.98% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor; Active Ingredient 99.98% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor Max; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor Plus; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Borathor Max PT; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Bluewater; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Term-A-Rid 613 Woodstakes; Active ingredient 0.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Term-A-Rid 613 Borate Treated Wood Chips; Active ingredient 0.50% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

GB-40; Active ingredient 40.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Uncle Albert's Super Smart Ant Bait; Active ingredient 1.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

X-Mold!; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

MGuard; Active ingredient 10.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

M7 Roach Killer Mop-on Insecticide; Active ingredient 98.00% Boron sodium oxide tetrahydrate /Disodium octaborate tetrahydrate/

[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on Disodium octaborate tetrahydrate (12008-03-4). Available from, as of March, 17 2009: <http://npirspublic.ceris.purdue.edu/ppis/> **PEER REVIEWED**

Administrative Information:

Hazardous Substances Databank Number: 7707

Last Revision Date: 20090820

Last Review Date: Reviewed by SRP on 5/7/2009

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