



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

May 31, 2019

Kevin Kutcel
Agent for Borates Plus, Inc.
KRK Consulting LLC
5807 Churchill Way
Medina, OH 44256

Subject: Registration Review Label Mitigation for Boric Acid/Sodium Salts
Product Name: Disodium Octaborate Tetrahydrate
EPA Registration Number: 87445-1
Application Date: October 4, 2018
Decision Number: 551308

Dear Mr. Kutcel:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Boric Acid/Sodium Salts Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions about this letter, please contact Jaclyn Pyne by phone at 703-347-0445, or via email at pyne.jaclyn@epa.gov.

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Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. Avoid contamination of food and feed. Do not have container where children or animals may gain access.

Personal Protection Equipment (PPE)

Personal protective clothing, normal work clothes (i.e. long pants, shoes plus socks, a long-sleeved shirt) plus waterproof gloves for all handlers. Wear a minimum of a NIOSH-approved elastomeric half mask respirator with organic vapor (OV) cartridges and combination N*, R, or P filters; OR a NIOSH-approved gas mask with OV canisters OR a NIOSH-approved powered air purifying respirator with OV cartridges and combination HE Filters during mixing and loading.

Respirator fit testing, medical qualification, and training

Using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134), employers must verify that any handler who uses a respirator is:

- Fit-tested and fit-checked,
- Trained, and
- Examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn. A qualified medical practitioner is a physician or other licensed health care professional who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. Handlers must be reexamined by a qualified medical practitioner if their health status or respirator style or use-conditions change.
- Upon request by local/state/federal/tribal enforcement personnel, employers must provide documentation demonstrating how they have complied with these requirements."

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency, call the National Pesticide Information Center at 800-858-7378.</p>

Disodium Octaborate Tetrahydrate	GROUP: 8D	INSECTICIDE
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Disodium Octaborate Tetrahydrate

A preservative for Protection and Treatment of Wood and Wood-Foam Composite Structural Components Against Decay Fungi and Wood-Destroying Insects.

ACTIVE INGREDIENTS:

Disodium Octaborate Tetrahydrate.....99.98%
Other Ingredients.....0.02%
TOTAL.....100.00%

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Side Panels for Additional Precautionary Statements and First Aid

MANUFACTURED FOR:

Borates Plus, Inc.
1101 S. Orange Blossom Trail
Apopka, FL 32703

EPA Reg. No. 87445-1

EPA Est. No. XXXX-XX-XXX

Net Weight 50, 2000 lbs

ACCEPTED

May 31, 2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 87445-1

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not discharge effluent containing this product into lake, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirement of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Wood treatment facilities must take steps to prevent runoff of the product into the waterway. Treated material stored outdoors within 100 feet of a pond, lake, stream, or river must be covered, surrounded by a containment berm, or otherwise protected to prevent surface water runoff. The containment berm must be of sufficient height to prevent runoff during heavy rainfall events.

Disodium Octaborate Tetrahydrate (DOT) is a water-soluble inorganic borate salt for the protection and treatment of lumber and wood-foam composite structural components against decay fungi and wood boring beetles including Powder Post Beetles (Lyctidae), Furniture Beetles and Old House Borers (Anodidae), Longhorn Beetles (Cerambycidae). This treatment is not effective against wood staining fungi and may require mixing with compatible products. Wood pressure treated with DOT resists attack of Subterranean Termites (Reticulitermes, Coptotermes, Heterotermes), Dampwood Termites (Zootermopsis), Drywood Termites (Kaloterms, Incisitermes), and Carpenter Ants (Camponotus) in treated wood.

Pressure treatment with only Disodium Octaborate Tetrahydrate is recommended for all interior wood and wood-foam composite structural components, which will be protected from rain and not in direct contact with soil. Wood and wood-foam composite structural components that are pressure treated with DOT can be used in exterior applications, unprotected from liquid water, including rain and not in direct contact with soil, when treated with a waterproof sealant following treatment with DOT. When end cuts are performed following the waterproofing treatment, it is recommended that the ends be resealed. This includes, but is not limited to, the manufacturer's proprietary polymer binder.

For resistance management, Disodium Octaborate Tetrahydrate contains Group 4D insecticide. Any insect population may contain individuals naturally resistant to Disodium Octaborate Tetrahydrate and other Group 4D insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed. To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Disodium Octaborate Tetrahydrate or other Group 4D insecticides/acaricides within a growing season, or among growing seasons, with different groups that control the same pests.

- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):

- o Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
- o Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
- o When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
- o Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.

- o The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.

- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.

- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.

- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

- For further information or to report suspected resistance contact company representatives at 724-332-1446 or at www.boratesplus.com.

Cross Tie Applications

Hardwood lumber (e.g. Crossities Railroad, and Switchties under AWWA Book of Standards, 2010, (Use Category U1-10, Section 3, Commodity Specifications for Treated Wood End uses.) can be treated using Disodium Octaborate Tetrahydrate (DOT). The DOT treated wood must also be post treated with an oil borne preservative or waterproof sealant for encapsulation purposes. The finished wood product can be rated as a 4C Category Use per the AWWA Book of Standards.

Hardwood species will require a minimum 20% DOT solutions. AWWA Book of Standards, Section T1-10, Sec. A lists the regulated operating conditions for a Pressure Treatment cycle. One gallon of 20% DOT solution is made by diluting 1.88 lbs of DOT with 7.45 lbs of hot water with good agitation and heat. The DOT solution must be kept agitated and heated to avoid crystallization. Hardwood ties can be treated with a 20% DOT solution to give a loading of 0.27 lbs/cu.ft. of DOT (1 lb of DOT/ 7"x9"x8.5' tie) by treating with approximately 0.6 gal DOT solution per tie.

End cut treatment

Since some Western species are not always completely penetrated when treated, they should be remedially treated at the jobsite by spray, brush or dip the end-cuts. Be sure to collect the run-off by using a plastic drop cloth. Spray or brush generously until the wood will accept no more solution. Or dip each end-cut for about 5 minutes.

DIP-DIFFUSION TREATMENT

Dimensional Lumber

Preparation of Solution

To prepare a Dip-Diffusion treatment solution, add water, (about 75% of the volume of solution required) to a mixing tank. At the required temperature, add the DOT under continuous agitation. Then the additional water can be added to the solution. The solution is then agitated for an additional 10-15 minutes so that all of the DOT has dissolved. Maintain the temperature of the solution to prevent crystallization upon cooling. In very cold weather, heating and insulation should be used to maintain temperatures. When the tank is not being used, it should be kept covered.

Approximate Conditions and Solution Strengths for the Dip-Diffusion Method

Pounds of DOT Per Gallon of Water	DOT Solution Conc.	Minimum Solution Temp.
1.5	15%	105°F (40°C)
2.0	20%	120°F (50°C)
2.8	25%	130°F (55°C)

Various species of wood will require different solution concentrations and the more difficult species may require another dipping cycle. Lumber treated in this process needs to conform to AWWA standards U1-10 and T1-10.

Method of Application

Dip freshly cut lumber (moisture content >30%) into the dip-diffusion tank containing the hot aqueous solution of DOT for 5-15 minutes. The treated wood should be stacked and kept covered in order to slow the drying process and prevent leaching of the DOT by rainfall. The DOT will begin to diffuse throughout the wood immediately. Storage conditions will influence the rate of the diffusion process. The species and thickness of wood will also dictate the rate of diffusion. Dip-diffusion of lumber must result in a retention of 0.28 lbs/ft³ (4.5 kg/m³) B₂O₃ for Formosan termite protection. The final loading of DOT must conform with AWWA specifications U1-10 and T-10. The required dip diffusion immersion times and solution concentrations will vary according to the species of wood treated. Increasing the dip time, concentration and temperatures increase the loading of the DOT. The wood must conform with AWWA Standards: 0.17 lbs/ft³ (2.8 kg/m³) B₂O₃ or 0.26 lbs/ ft³ DOT (4.2 kg/m³) against Non-Formosan termites. Formosan termites require 0.28 lbs/ft³ B₂O₃ (4.5 kg/m³) or 0.42 lbs/ ft³ DOT (6.7 kg/m³ DOT).

BRUSH AND SPRAY APPLICATIONS

Dimensional Lumber

Lumber treated by brush and spray applications shall conform with all AWWA (American wood Preservation Association) Standards. The moisture content of the wood must be a minimum of 17%. Higher initial moisture contact will increase the concentration of the DOT. For control of termites, Carpenter ants and wood decay fungi, apply the 15% aqueous solution of DOT by brush or spray until the surface is thoroughly wet (1 gallon per 200 square feet). For adequate loading of the DOT per AWWA specifications, treatment must be conducted a second time (or even a third time for Dampwood or Formosan Termites) after the surface has dried. A single coat of 15% DOT solution at 200 sq. ft./ gallon, will give 0.15 lbs/ft³ (pcf., pounds/cubic foot) of the active ingredient (DOT, Disodium Octaborate Tetrahydrate) to 0.6 inch depth of the sprayed surface.

NOTICE TO WOOD TREATER

PRESSURE TREATMENT: Pressure treatment of wood and wood-foam structural components must rigidly adhere to the current specifications of Disodium Octaborate Tetrahydrate established by the American Wood Preservers' Association (AWPA).

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in a dry place. Do not store where children or animals may gain access.

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: Nonrefillable Container. Do not reuse or refill this container. Offer for recycling, if available. 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.

Notice: Because of many varying conditions affecting use and application, manufacturers warns buyer that these may impair or vary the results of the use of this product. In any event, complete prevention of decay by fungi or other organisms is not guaranteed. Neither manufacturer nor seller shall be liable in respect to any injury or damage suffered by reason of the use of this product for purpose not indicated by the label or when used contrary to the directions or instructions hereon more with respect to breach of any warranty not expressly specified herein. Buyer accepts this material is subject to these terms, assumes all risk of usage and handling except when used or handled in accordance with this label. Neither manufacturer nor seller, makers, and their employees and agents are permitted to make, any representations or warranties, express or implied to the extent not prohibited by applicable law.