



EnviroSafe Plus™ is a revolutionary technology that combines a highly effective and widely used pesticide – DOT (Disodium Octaborate Tetrahydrate) Borates – with a patented binding process that fixates the borates within the wood for decades of protection against insects, rot and other forms of biological degradation. **EnviroSafe Plus™** contains no arsenic, no ammonia, no copper, no chromium and no other heavy metals, which raise health, environmental and disposal concerns.

Component I: DOT Borates

The active preservative ingredient of Disodium Octaborate Tetrahydrate (DOT) is boron, an inorganic element that occurs naturally throughout the world. Boron has been used as a wood preservative since the 1930's for protection against rot, fungus, mold, termites, carpenter ants, wood borers, roaches, fleas, silverfish and other pests. The form of boron most commonly used for wood preservation is Disodium Octaborate Tetrahydrate (DOT). Boron derivatives are also widely used in consumer products such as detergents, eyewash, adhesives and cosmetics, and are used industrially as corrosion inhibitors.

Borates are an essential mineral for all vascular plants as well as an important component of human nutrition (WHO, 1996) and when used as prescribed with **EnviroSafe Plus™**, they are harmless to humans, other mammals and the environment. However, borates – particularly the DOT variety – are lethal to insects and other pests. DOT does not protect by poisoning but rather by interfering with insects' ability to metabolize food and by causing enzymatic reactions with fungi rendering them unable to grow or reproduce. In addition to their protection against insects and fungi, borates are also inherently fire retardant. Borates have the added feature of being invisible, when applied to wood products for preservation and thus do not alter the color of preserved wood.

After decades of commercial use, largely in the U.S., Australia and New Zealand, the U.S. EPA has determined that boric acid and its salts show no evidence of carcinogenicity; do not break down into ineffective by-products; and do not evaporate to negatively affect indoor air quality. And, even though they are water soluble, they do not travel far in the environment – especially in soil – re-crystallizing when the water evaporates. To date, borates have been used extensively for topical (surface-only) applications on wood and increasingly for “whole-house treatment” in the western U.S. and Hawaii.

Prior to the advent of **EnviroSafe Plus™**, borate treatment of wood was not viewed as a permanent preservative but now, thanks to **EnviroSafe Plus™**, borates stay in the wood.

Component II: Patented Binding Process

The **EnviroSafe Plus™** patented binding process is the key to the long-term effectiveness of the DOT Borates present in the wood. During the two step pressure-treating process, the silicate-binder causes a “fixation” of the DOT Borates throughout the wood and thereby provides a high level of protection from insects and decay for decades. Numerous tests have been performed on **EnviroSafe Plus™** treated wood to confirm the continued presence and performance of DOT Borates.

Silicates are also non-toxic – having a toxicity profile about the same as regular glass. They are also used industrially as corrosion inhibitors.

The Final Product: DOT Pressure-Treated Wood with the added Protection of **EnviroSafe Plus™**

Pressure treatment of wood with DOT Borates and **EnviroSafe Plus™** is truly unique. It is environmentally friendly and maintains the natural color and beauty of wood. It has dimensional stability, which reduces warping, cracking, and splitting, and maintains wood's natural strength. It has flame and smoke retardant properties, inhibits the growth of mold and mildew, and is formulated with non-corrosive chemicals. For these reasons and many others, pressure-treatment of wood with DOT Borates and **EnviroSafe Plus™** is the wood preservative of the future!



NOW! A patented binding process that keeps (Disodium Octaborate Tetrahydrate) DOT Borates in wood. The active ingredient of DOT is boron, which has been used as a wood preservative since the 1930's for protection against rot, fungus, mold, Formosan termites, carpenter ants, wood borers, roaches, fleas, silverfish and other pests.

DOT Borates and **EnviroSafe Plus™** offer an effective alternative to commonly used wood preservatives that contain controversial chemicals such as arsenic, copper, chromium or various petroleum derivatives.

DOT Borates & EnviroSafe Plus™

- For Applications in accordance with AWPA C2 (C31), C9 and building codes per ICC-AC62.
- Protection Against Wood-Destroying Insects (Including Formosan Termites).
- Protection Against Decay Fungi (Rot).
- Retains Wood's Natural Color (No Discoloration from Treatment).
- **EnviroSafe Plus™** is safer: No Arsenic; No Heavy Metals.
- Flame Retardant Properties.
- Increases Strength to Weight Ratio of Wood / Increases Durability / Reduces Splitting & Warping / Dries Quicker.
- Maintains Fastener & Connector Holding Strength.
- Reduces Nail & Fastener Pop-Outs.
- Minimizes Tool Wear.
- Applicable to Dimensional Lumber & Wood-Based Panels.
- Applicable to Most Commonly Used Species of Wood.
- Lower Weight (Up to 25% Less Than Other Types of Treated Wood).
- 40 Year Transferrable Limited Warranty.

The Benefits of Treating Wood with DOT Borates and **EnviroSafe Plus™**

Insect Resistant

Wood treated with DOT (Disodium Octaborate Tetrahydrate) Borates and **EnviroSafe Plus™** is lethal to insects. Laboratory test results confirm that the patented binding process used by **EnviroSafe Plus™** fixates the DOT Borates in the wood acting as a natural insecticide against a variety of wood-destroying insects and termites, including the Formosan Termite.

Protection Against Decay Fungi (Rot)

Various species of wood used in that has been exposed to water and used in high-moisture conditions is prone to biological degradation that can be devastating to your home. Laboratory test results have shown that wood pressure-treated with DOT Borates and **EnviroSafe Plus™** is resistant to decay from fungi that cause rot.

Fire Retardant

Wood treated with DOT Borates and **EnviroSafe Plus™** protects wood from nearly all enemies, including fire. By using sodium silicates instead of toxic chemicals used in competing wood preservatives, **EnviroSafe Plus™** provides inherent flame retardant protection for treated wood. Laboratory test results indicate that DOT Borates and **EnviroSafe Plus™** meets the Class II Flame Retardant standard outlined by the National Fire Protection Association (NFPA).

Effective in Most Woods

Pressure-treating of wood with DOT Borates and **EnviroSafe Plus™** is effective in most common wood species to safeguard them for years to come.

Improved Strength to Weight Ratio

It is common knowledge in the building industry that a change in moisture content and/or temperature variations cause wood to change shape and dimension. Pressure-treating wood with DOT Borates and **EnviroSafe Plus™** improves the strength to weight ratio of wood, thus reducing the occurrence of splitting and warping.



Wood is beautiful, and **EnviroSafe Plus™** helps by keeping it that way!

Wood that is pressure-treated with DOT Borates and **EnviroSafe Plus™** maintains its natural color and beauty. The wood dries quickly permitting staining, sealing or painting of your project, to further enhance the wood's long-term servcability. Wood that is pressure-treated with DOT Borates and **EnviroSafe Plus™** also reduces the tendency for warping, cracking and splitting while maintaining the wood's natural strength.

EnviroSafe Plus™ is Environmentally Safe

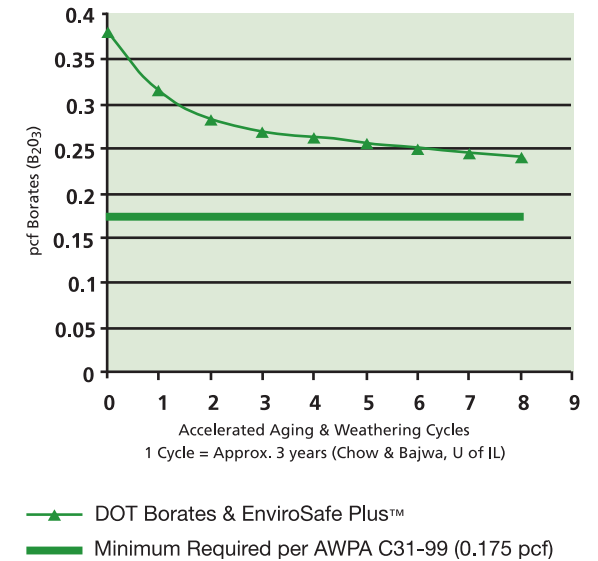
Wood that is treated with DOT Borates and **EnviroSafe Plus™** is safe for residential, public, commercial, governmental and military wood requirements. No more fears of:

- Arsenical preservatives or any heavy metals used in other products.
- Toxic sawdust and particle exposure, which requires protective equipment from chemicals. (Standard woodworking safety practices and equipment should still be used.)
- Direct or indirect contact with drinking water.
- Special requirements for disposal of treated wood products or scrap.
- Long-term exposure from working with, sitting on, walking on, breathing near or eating on, treated wood.

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Evaluation of Borate Retention for wood treated with DOT Borates and **EnviroSafe Plus™** following Accelerated Aging & Weathering.

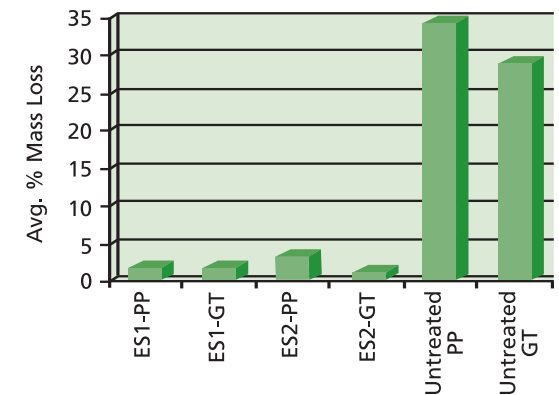
Scientific Certification Systems & University of Toronto



Protection Against Decay Fungi Following Accelerated Aging & Weathering of Treated Wood

Average % Mass Loss for Specimens Exposed to *G.trabeum* & *P.placenta* ("brown rot") Fungi

Scientific Certification Systems & University of Toronto



- "ES1" & "ES2" = **EnviroSafe Plus™** specimens (40 total)
- "Untreated" = Untreated control specimens (20 total)
- "PP" = *P.placenta*; "GT" = *G.trabeum*

Full reports available at: www.eswoodtreatment.com