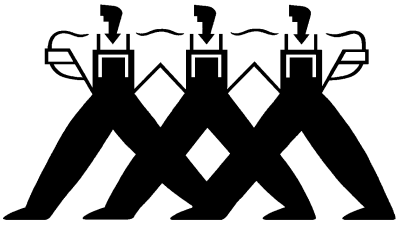
BORON Preservatives

Technical Data & References

See BBA Certificate No.:93/2893 **for Pre-Treatment Use -** BWPDA APPROVED

SINGLE CHEMICAL - TRIPLE USE TIMBER TREATMENT



Property Repair Systems
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Introduction

Boron is an Element and in its natural form is found in the ground as a mineral deposit in the crystalline group known as 'Borates' (oxides of boron). This group includes boric acid, borax and others. Small amounts of boron are found in the soil, sea, plants and animals. Borates are essential micronutrients and excess amounts in the human body do not accumulate, but are simply excreted in urine.

Special features

- ***1 Hour Re-entry F/I/FWS***
- Supplied as a powder
- Easy to use and mix
- Convenient pack size
- Odourless, dries clear
- Non Flammable, no vapour
- Very low acute toxicity
- Zero organic solvents
- Exceeds EN49-1 by 17%

DESCRIPTION

The Boron powder used in Ultra 12 products is the most soluble form of Boron and it quickly forms a clear solution after mixing with water only. It does not require 'Micro' type emulsifiers to be added and it will not clog pumps or spray lances.

TECHNICAL DATA

Active Substance
Disodium octaborate tetrahydrate
($Na_2B_8O_{13}\,4H_2O$)
Other Components
To be diluted with water only
Corrosion
No action
Aggressivity to other materials
No known aggressivity
Adhesive application
Wood impregnated with BORON ULTRA 12 can be glued when dry.
Passes European Test Standards:
BS EN 49-1&2:2005 - Anobium punctatum
BS EN 47:2005 - Hylotrupes bajulus
BS EN 20-1:1992 - Lyctus brunneus

USES

- glass production
- detergent preparations
- agriculture
- glazes
- pesticides, including termite control

HISTORY

Discovered - USA late 1800's
First mined by Francis M 'Borax' Smith in 1872 and derived from the crystalline material 'tincal', which contains about 50% borate.
Purified and sold throughout the world in vast quantities as Tim-bor Professional, it poses a low risk to the environment, especially when compared with other current pesticides, because of its lower toxicity to fish.
Now backed by more than 100 years of research and development, manufactured in the USA by Borax, based in Valencia, California.

SAFETY

REFERENCE:

International Symposium on the Health Effects of Boron and its Compounds, University of California, September 1992.

A major research project was reported which investigated the reproductive health effects of exposure to boron among workers at the US Borax mine in Boron, California. Its miners were clearly more exposed to borate dusts than any user or member of the public.

The results gave a birth rate 10% higher than the national average

Other long term test were carried out and no serious respiratory consequences of exposure to borate dusts were revealed, and workers were found to have blood levels of boron comparable with the unexposed average for the USA.

The human body excretes Borons, so there is no build up in the blood or body tissues.

SAFETY MARGIN

There is no such thing as a toxic chemical, there is only a toxic dose.

Historically, the size of the toxic dose for boron has long been identified with that of common table salt.

It is now clear that very small amounts of boron do have biological and physiological effects which are primarily beneficial. Adverse effects are only noted at high dose levels in animals, leading to the conclusion that there is a wide safety margin in humans at typical exposure levels.

The claim that boron can help to relieve arthritis is being investigated.

OTHER REFERENCES

(a few examples of English titled papers and summary titles - ask for a full list)

Cummins 1939 - Powder post borer
Drysdale 1994 - Fungi and termites
Lloyd 1991 - Treatment of pine
Lloyd 1997 - International status of borate
Spiller 1948 - Toxicity to anobium
Taylor 1967 - Toxicity to CFB & Longhorn
Suomi & Akre 1992 - Control of Beetles
Graf 1998 - Treatment of spruce
Berry 1991/2 - BRE Tests C51 - Serpula
BBA Certificate - Wykamol No.93/2893

PACKAGING

Supplied as powder concentrate for dilution with water. HSE 8 hour re-entry all uses.
Packs:
1.0kg = 25 litres diluted (4.76%)
2.5kg = 25 litres diluted (12.2%)

Mixing: add powder to water and stir. White deposits in the container indicate under dilution, insufficient mixing or temperature drop after storage.
Wait for cloudiness to clear before use, if necessary agitate or warm until clear.
Storage: keep in a secure place sealed
Shelf Life: 12 months sealed

TECHNICAL SERVICE

We offer design and site technical support to ensure that all Property Repair Systems products can be correctly Specified and safely applied. Ask for our Training Course Brochure.

HEALTH AND SAFETY

Approved for use as directed under COPR 1986 (HSE No.7203). Made from100% Disodium octaborate tetrahydrate. Use only as a wood preservative and surface biocide. Always read the product label. (Use Pesticides Safety).

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