



SANSIN IMPEL® BORON RODS

DESCRIPTION

The Impel®Rod is a highly concentrated solid formed, water-diffusible borate rod created from compounds of boron, a naturally occurring preservative element. The rod combines with water to become boric acid, which has long been recognized as a natural inhibitor of decay-causing fungi and insect infestation. Once the Impel rod is inserted into damaged log ends, it remains inactive until moisture in the wood increases at which time it slowly dissolves and the moisture stream carries this fungicide along the wood fiber paths to saturate the rotting areas. When the wood dries and moisture levels drop below approximately 25%, the preservative becomes dormant and provides a reserve that is ready to reactivate should decay-conducive conditions reoccur.

APPLICATIONS

Impel®Rods offer the only effective decay control system that protects logs internally. They are ideal for both preventative treatments of high-risk areas and remedial treatments in areas with existing decay fungi and wood-destroying insects. They are not recommended for food-contact wood. Impel®Rods combined with periodic wood preservative treatment will halt the rate of wood decay in log homes but they cannot repair any damage that has already been done. The plugs should be removed and their status checked every 3 to 5 years to see if replacement is necessary. Impel rod effectiveness can be greatly enhanced if wood surfaces are sealed with a water sealant or water repellent stain.

CHARACTERISITICS

The Impel®Rod remains dormant until the moisture levels in the wood reach about 25%, the level where conditions are ripe for wood rot. Contact with water activates the rods and they begin to diffuse and slowly deposit boric acid crystals throughout the surrounding wood. Wood is composed of millions of porous cells comprising an intricate vascular system that is both the cause and solution to log decay; it is this vascular system that allows for efficient transportation of boric acid. As moisture enters the log ends, the boron rod combines with the water and naturally gravitates to those areas with the highest moisture content - the areas most affected by wood decay fungi. The Impel rods contain 100% Anhydrous Disodium Octaborate equal to 1.5g of Boric Acid per gram of rod.

Rod Dimensions (mm)	Net Weight of 1 Rod (grams)(+/-6%)	Corresponding Weight of Boric Acid per Rod
8 X 65	6.9	10.0
12 X 100	24	36
18 X 75	40	58

PRODUCT BENEFITS

Impel®Rods are:

- the most cost-effective measure that can be taken to protect log and timber structures against decay
- “user friendly” and environmentally acceptable
- highly toxic to fungal decay and many insects at concentrations that are not poisonous to humans or other mammals.

PREPARATION

There are 3 steps to install Impel®Rods:

1. Drill appropriate sized holes to accommodate the rods. Drill holes should be about 1/16” greater in diameter than the rods for a snug fit. This ensures diffusion in all directions.
2. Insert Impel rods into the holes. They may be positioned in a variety of ways depending on access and owner preference. A drilling pattern that is least conspicuous may be selected for aesthetics. (see diagrams 1 through 5)
3. Seal the holes with wooden dowels, wood filler, or caulk. A minimum of 1/8” (2-3mm) head space should be left between Impel rods and the hole plug or cap to allow for rod expansion. The covering may be stained or sealed.

APPLICATION METHODS Placement into the very heart of wood offers superior protection over brush-on or spray type wood preservative treatments. All areas where wood is exposed to water are at high risk, such as in soil, concrete, and other places that retain moisture. Impel®Rods can be inserted through any wood surface, depending on access, in either a staggered or linear pattern, see diagrams 1-5 above. First, calculate the total cubic feet of wood to be treated with Impel®Rod. A convenient way to calculate cubic feet in sawn and round materials is found in Table 4. For best results, linear spacing *along* the grain should be between 8” and 18” intervals. And since diffusion *across* the grain is more limited and there is a higher risk of attack, spacing should be at 2” to 6” intervals. It is important to understand that spacing depends upon the size of the Impel rod, the dimensions of the wood, and the volume of wood to be treated. If log ends have badly deteriorated, it would be best to trim an inch or more off the timber. After the rods are inserted, this exposed log end should be well treated with a water-repellent wood finish. Precautions should be taken when used in structural timber as holes drilled in critical positions may seriously weaken the structure. Advice should be obtained from a qualified engineer where remedial treatment of load-bearing timber is required

COVERAGE The rate of application for Impel®Rods is equivalent to 6.0kg of Boric Acid per cubic meter of wood (6oz per cubic foot).

STORAGE Store in original containers, tightly closed and in a safe place. Do not allow freezing.

SAFETY See **Material Safety Data Sheet (MSDS)**

WARNING TO USERS Keep out of reach of children. Keep away from animal feed-stuffs.

Before determining the most appropriate product it is necessary to specifically identify the source of the problem, so that the best method of treatment can be applied. Technical advice of this nature is available from your supplier or your local Technical Agent. The information contained in this document is given in good faith based on our current knowledge.

The use of the product is beyond the control of The Sansin Corporation, and no guarantees, expressed or implied, are made as to the result to be obtained if not used in accordance with the published Directions for Use.

The Sansin Corporation does not assume any legal responsibility for use or reliance on same.

This information must on no account be used as a substitute for necessary field tests, which alone can ensure that the product is suitable for the expected use. Before using any product, read its label.

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