

26-NOV-2007 Notification - Change in Registrant

07-FEB-2002

**Sasco Products Limited
IMPEL (BORON) RODS (D)
Wood Preservative**

Protection of Wood against Fungal Decay and Insects

DOMESTIC

READ THE LABEL AND TECHNICAL BULLETIN BEFORE USING

KEEP OUT OF REACH OF CHILDREN

This package contains small pieces which may pose a choking hazard to small children

HARMFUL OR FATAL IF SWALLOWED

GUARANTEE:
ANHYDROUS DISODIUM OCTABORATE
(Na₂B₈O₁₃) 100%

ROD SIZE: WEIGHT/ROD:
NUMBER/PKG:
NET CONTENTS: KG
NUMBER PLASTIC OR WOOD PLUGS/PKG:

REGISTRATION NO. 25704 PEST CONTROL PRODUCTS ACT

Notification Change

Developed by: Kai R. Spangenberg EFTF I/S
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~~CH 7001 Chur,~~ Denmark
~~Switzerland~~

Canadian importer and Agent:
SASCO PRODUCT LTD.
31 Ilsley Ave.,
Dartmouth, Nova Scotia
Canada B3B 1L5

USE LIMITATIONS:

Do not use IMPEL (BORON) RODS (D) for treating wood which is in contact with food, feed or drinking water. Do not use IMPEL (BORON) RODS (D) for treating Hydro or other poles owned by utilities.

DIRECTIONS FOR USE: (Read the enclosed Technical Bulletin)
IMPEL (BORON) RODS (D) are recommended for pre-treatment and remedial protection of non-food contact wood and wood products, against decay and insects.

IMPEL is not effective against termites.

IMPEL (BORON) RODS (D) is to be used in lumber with a permanent or periodical moisture content above the fibre saturation point (30%), e.g. window frames, bottom sill members or logs.

The IMPEL (BORON) RODS (D) is inserted in a drilled hole of the appropriate size. The hole is covered by a cap (plug). Never hammer the IMPEL (BORON) RODS (D) during installation. See technical bulletin for cutting and further instructions. By using a plastic cap it is possible to carry out inspections, e.g. in conjunction with the maintenance of the surface treatments. If the IMPEL (BORON) RODS (D) has dissolved, the timber has been subjected to a moisture content above the fibre saturation point, and a new IMPEL (BORON) RODS (D) can be inserted in the hole.

When the wood is dry, painting, or any other type of surface coating, may be applied if desired. The remedial treatment is carried out at positions particularly susceptible to decay, e.g. end grain, joints, etc. In placing of the IMPEL (BORON) RODS (D) use caution not to cause structural damage to window or casement etc.

(See diagram)

The distance between the IMPEL (BORON) RODS (D) should be 20-25cm in the zone to be protected.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. Fatal if swallowed and may pose a choking hazard. Avoid breathing the dust and contact with skin, eyes, and clothing. Wear chemical resistant gloves if prolonged contact with the product is anticipated. Avoid rubbing eyes while working with this product. Remove contaminated clothing and wash before reuse. Wash hands thoroughly after handling this product and before eating or smoking. Store in a dry location and out of contact with food and feed.

ENVIRONMENTAL HAZARDS

Do not apply this product directly to water. Do not contaminate water when disposing of equipment waste waters. This product is harmful to fish.

FIRST AID

If in eyes: Flush with plenty of water, contact a physician.

If on skin: Wash with plenty of soap and water.

If swallowed: call a physician or poison control centre immediately. Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with finger, or if available, by administering Syrup of Ipecac. Do not induce vomiting or give anything to an unconscious person. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

Contains Anhydrous Disodium Octaborate. Treat symptomatically.

DISPOSAL

Do not re-use empty container. Wrap and dispose of empty container with household garbage.

NOTICE TO USER: This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

NOTICE TO BUYER: Seller's guarantee shall be limited to the terms set out on this label and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

Technical Bulletin
IMPEL® (BORON) RODS (D)
Solid Wood Preservative
READ THE LABEL AND THIS TECHNICAL BULLETIN BEFORE USING

For the Protection of Wood Against Fungal Decay
DOMESTIC

KEEP OUT OF REACH OF CHILDREN
HARMFUL OR FATAL IF SWALLOWED

DANGER POISON

Guarantee:
Anhydrous Disodium Octaborate (Na₂B₈O₁₃) 100.0%
(Boric Oxide Equivalent82.0%)

REGISTRATION NO. 25704 PEST CONTROL PRODUCTS ACT.

Precautionary Statements
Hazards to Human and Domestic Animals

Notification Change

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PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Fatal if swallowed and may pose a choking hazard. Avoid breathing the dust and contact with skin, eyes, and clothing. Wear chemical resistant gloves if prolonged contact with the product is anticipated. Avoid rubbing eyes while working with this product. Remove contaminated clothing and wash before reuse. Wash hands thoroughly after handling this product and before eating or smoking. Store in a dry location and out of contact with food and feed.

FIRST AID:

If in eyes: Flush with plenty of water, contact a physician.
If on skin: Wash with plenty of soap and water.
If swallowed: call a physician or poison control centre immediately. Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with finger, or if available, by administering Syrup of Ipecac. Do not induce vomiting or give anything to an unconscious person. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

ENVIRONMENTAL HAZARDS:

Do not apply this product directly to water. Do not contaminate water when disposing of equipment waste waters. This product is harmful to fish.

STORAGE AND DISPOSAL:

Do not contaminate water, food or feed by storage or disposal. Store in dry conditions at all times and out of the reach of

children.

Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Packaging disposal: Dispose of empty packaging in ordinary trash collection.

DIRECTIONS FOR USE

Use Limitations: Do not use Impel (Boron) Rods (D) for treating wood which is in contact with food, feed or drinking water. Do not use Impel (Boron) Rods (D) for treating Hydro, or other poles owned by utilities.

It is a violation of Federal Law to use this product in a manner inconsistent with its labelling. READ THE ENTIRE LABEL BEFORE USING.

DIRECTIONS FOR WOOD AND WOOD PRODUCTS

Impel (Boron) Rods (D) are recommended for the preventive and remedial protection of wood and wood products, including: lumber, timbers, logs, millwork, poles, posts, laminated beams, etc., against fungal decay.

The target rate of application for Impel (Boron) Rods (D) is 6.0 kg/m³ of Boric Acid Equivalent (BAE) of wood for remedial treatments and 3.0 kg/m³ for preventive treatments. Impel (Boron) Rods (D) contain 1.45 grams of BAE per gram. The following table shows the BAE for each size of Impel (Boron) Rods (D), in grams and ounces:

Impel (Boron) Rods (D) by size and Boric Acid Equivalent

Dimensions (dia. X length)		Weight		BAE	
		g	(oz)	g	(oz)
6mm x 12mm	(1/4" x 1/2")	0.6	(0.02)	0.8	(0.03)
8mm x 65mm	(1/3" x 2 5/8")	6.5	(0.23)	9.4	(0.33)
12mm x 50mm	(1/2" x 2")	12.2	(0.43)	17.6	(0.62)
12mm x 100mm	(1/2" x 4")	24.1	(0.85)	34.9	(1.23)
18mm x 75mm	(3/4" x 3")	39.7	(1.40)	57.6	(2.03)

*BAE = Boric Acid Equivalent / IMPEL (Boron) Rod (D) (or grams /IMPEL (Boron) Rod (D))

Impel (Boron) Rods (D) are designed to be inserted into

decaying wood or wood in high-risk areas through drilled holes. They are positioned in such a way that moisture will distribute the desired loadings of preservative throughout the target area.

There are three steps to install Impel (Boron) Rods (D):

1. Drill appropriate sized holes to accommodate the predetermined number and size of Impel (Boron) Rods (D) required:
2. Insert the suitable size and number of Impel (Boron) Rods (D) into the holes; and
3. Seal the hole with a treated wooden dowel, wood filler or caulk.

Drill holes 2mm (1/16th inch) greater in diameter than the preservative rods to result in a snug fit. This will ensure proper diffusion in all directions from the rod. In addition, leave a minimum of 4mm (c inch) of head-space between Impel (Boron) Rods (D) and hole plug to allow for expansion. Afer installation, paint or any other type of surface coating may be applied to the wood if desired.

Install Impel (Boron) Rods (D) in the general vicinity of where the potential for decay is greatest or where decay exists. Impel (Boron) Rods (D) can be inserted through any wood surface depending on access. In either a staggered, linear or angled pattern. Start at 15cm (6 inches) from a joint or the end of the wood and cover the entire affected length. Linear spacings along the grain should not exceed 37.5 cm (15 inches) on centre and spacings across the grain should not exceed 15cm (6 inches) on the centre.

General Information

Impel (Boron) Rods (D) are moulded from water-diffusable borates and are highly concentrated for maximum efficiency. When inserted into decaying wood or wood in high risk areas, Impel (Boron) Rods (D) diffuse very slowly and provide a controlled and long lasting release of borate preservative.

Preservative Diffusion

The diffusion process depends on moisture to work. When moisture contents reach levels suitable for decay attack (i.e. around 25%), Impel (Boron) Rods (D) begin to diffuse throughout both heartwood and sapwood for total protection. If moisture levels drop below 25%, the preservative becomes dormant and provides a reserve ready to reactivate when decay

conductive conditions recur. See Diagram 1 below for an illustration of this diffusion process over time.

DIAGRAM 1

(Diagram)	(Diagram)	(Diagram)
Position of Impel (Boron) Rods (D)	Diffusion of Impel (Boron) Rods (D)	Diffusion of Complete

Preservative Durability

The less consistently moist the environment, the longer Impel (Boron) Rods (D) will last. Impel (Boron) Rods (D) will provide decay protection for many years in window millwork, where lower moisture and protective coatings combine for very slow diffusion. However, in consistently moist to wet environments (i.e., fence posts, landscape timbers, etc.) Impel (Boron) Rods (D) may retain their effectiveness for 1 year to 10 years, depending on the rate of dissolving. The rods should be checked periodically and new rods inserted, if necessary.

Application Site

Install Impel (Boron) Rods (D) in areas where wood decay is present or where the potential for decay exists. Examples include:

Flooring and Foundation Systems: especially around kitchens and bathrooms where leaky plumbing, deteriorated caulking and inadequate moisture barriers may be common.

Window and Door Framing: where weathered paint provides inadequate protection against moisture. Garage doors and the base of their frames are particularly susceptible areas.

Exterior Steps, Porches and Decks: where damage may occur in columns, railings, floors and support members.

Roof Trim and Facia: especially facia boards supporting gutter systems and soffits; where trim is in contact with skylights, vents and chimneys and where excessive moisture is common.

Attics and Roofing: where leaks may cause decay damage to

support members and rafters.

Porches and Garages: where concrete slabs abut walls and trim.

Fence Posts: where decay is common near the ground line.

Log Construction: in any decayed or susceptible areas where moisture is present; especially cracks and checks that allow water entry into corners, joints, end and lower courses.

Note: If any wood members structural integrity has been reduce to the extent that repairs or replacement is necessary, repairs and/or replacement should be made and the source of moisture should be reduced or eliminated. **Impel (Boron) Rods (D) will not add structural integrity to previously damaged wood.** Impel (Boron) Rods (D) may be used where durable (decay resistant) woods such as cedar or pressure treated lumber contact the ground. Impel (Boron) Rods (D) should not be used for treating ground contact portions of untreated non-durable wood species used for treating ground contact portions of untreated non-durable wood species (spruce, pine, aspen) since it is not likely to be effective under those severe conditions. A few examples of where to place Impel (Boron) Rods (D) and the sizes to use are found in table 1.

TABLE 1
RECOMMENDED IMPEL (Boron) ROD (D) SIZES FOR VARIOUS
APPLICATIONS

Area	Impel (Boron) Rod (D)		BAE	
			g	(oz)
Windows, Door Frames, Smaller Millwork, Facial Applications in Dimensional Lumber, Facia Boards & Eaves	6mm x 12mm	(3/4" x 2")	0.85	0.03
Joists, Rafters, Girders, Headers and Sleepers	8mm x 65m	(1/3" x 2 5/8")	8.50	0.33
Fence Posts and Timbers	12mm x 50mm	(½" x 2")	17.58	0.62
Foundation Posts, Large Beans, and Large Timber Applications	12mm x 100mm	(½" x 4")	34.87	1.23
Logs and Wood Poles	18mm x 75mm	(3/4" x 3")	57.55	2.03

*BAE = Boric Acid Equivalent / IMPEL (Boron) Rod (D) (or grams / IMPEL (Boron) Rod (D))

Method of Application

Impel (Boron) Rods (D) can be inserted through any wood surface, depending on access, in either a staggered, linear or angled pattern, as indicated in Diagrams 2 - 4.

It is important to understand that spacing depends upon the size of the IMPEL (Boron) Rod (D), the dimensions of the wood, and the volume of wood to be treated. For best results, linear spacings should not exceed 37.5cm (15 inches) on centre. And since diffusion across the grain is limited, these spacings should not exceed 15cm (6 inches) on centre.

Whenever possible, start holes approximately 15cm (6 inches) or more on either side of any area showing signs of decay. Continue placing holes throughout the decayed area and for at least 15cm (6 inches) past the end of the decayed section.

The recommended size of Impel (Boron) Rods (D) and their linear spacings for various sawn and round wood dimensions are provided in Tables 2 and 3.

If the recommended rod size and spacing for your job cannot be found in Tables 2 and 3, information can be determined in the following manner:

- 1) Calculate the total volume of wood to be treated with Impel (Boron) Rods (D). A convenient way to calculate volume in sawn and round materials is found in table 4.
- 2) Multiply the volume by 0.0985g (0.0035 oz) BAE/cubic inch (or 0.006 g/cm³), the recommended loading. This calculation gives the total BAE required to treat this volume of wood.
- 3) Determine the number of Impel (Boron) Rods (D) required by dividing the total BAE content needed to treat the wood by the BAE content of the rod selected for the job.
- 4) Finally, select the size of Impel (Boron) Rods (D) that will provide effective treatment of the target area with the fewest number of drill holes possible. Recall that linear spacing should not exceed 37.5cm (15 inches) on centre. Refer to Tables 2 & 3 for assistance in selecting the rod size and refer to Diagram 2 - 4 for examples of rod positioning.

TABLE 2
DIMENSIONAL LUMBER AND TIMBERS

Nominal Size	Common Std Sz	Actual Size	Rod Size (dia x length)	Hole Size (dia x length)	Linear Space Between Holes	No. of Rods Per Hole
25 x 25mm	1" x 1"	18 x 18mm	6 x 12mm	8 x 18mm	28.8 cm	1
25 x 50mm	1" x 2"	18 x 35mm	6 x 12mm	8 x 25mm	20.0 cm	1
25 x 100mm	1" x 4"	18 x 88mm	6 x 12mm	8 x 55mm	15.0 cm	2
50 x 150mm	2" x 6"	36 x 140mm	8 x 65mm	10 x 100mm	27.5 cm	1
50 x 200mm	2" x 8"	36 x 180mm	8 x 65mm	10 x 125mm	20.0 cm	1
50 x 250mm	2" x 10"	36 x 230mm	8 x 65mm	10 x 150mm	17.5 cm	1
50 x 300mm	2" x 12"	36 x 280mm	8 x 65mm	10 x 205mm	27.5 cm	2
100 x 100mm	4" x 4"	88 x 88mm	8 x 65mm	10 x 75mm	17.5mm	1
50 x 250mm	2" x 10"	36 x 230mm	12 x 50mm	14 x 138mm	30.0 cm	1
50 x 300mm	2" x 12"	36 x 280mm	12 x 50mm	14 x 160mm	25.0 cm	1
100 x 100mm	4" x 4"	88 x 88mm	12 x 50mm	14 x 70mm	35.0 cm	1
100 x 150mm	4" x 6"	88 x 140mm	12 x 50mm	14 x 95mm	22.5 cm	1
100 x 200mm	4" x 8"	88 x 188mm	12 x 50mm	14 x 120mm	15.0 cm	1
150 x 150mm	6" x 6"	138 x 140mm	12 x 50mm	14 x 120mm	27.5 cm	2
100 x 150mm	4" x 6"	88 x 140mm	12 x 100mm	14 x 120mm	37.5 cm	1
100 x 200mm	4" x 8"	88 x 188mm	12 x 100mm	14 x 145mm	32.5 cm	1
150 x 150mm	6" x 6"	138 x 140mm	12 x 100mm	12 x 120mm	27.5 cm	1
150 x 200mm	6" x 8"	138 x 188mm	12 x 100mm	14 x 145mm	20.0 cm	1
150 x 200mm	6" x 8"	138 x 188mm	18 x 75mm	20 x 130mm	35.0 cm	1
150 x 300mm	6" x 12"	138 x 288mm	18 x 75mm	20 x 180mm	22.5 cm	1
200 x 200mm	8" x 8"	188 x 188mm	18 x 75mm	20 x 130mm	25.0 cm	1
250 x 250mm	10" x 10"	488 x 488mm	18 x 75mm	20 x 155mm	32.5 cm	2
300 x 300mm	12" x 12"	288 x 288mm	18 x 75mm	20 x 180mm	22.5 cm	2

In the interest of space, only metric sizes are shown here.

Note: Recommended application rates based upon rods installed in a linear pattern and preservative retention of 170g (6 ox) BAE/cf. (6kg/m³) for remedial treatments. If necessary,

holes can be drilled on an angle to leave room for plug and expansion.

Caution: When drilling into structural support members, such as joists, consult your local building code authority for restrictions. Extensive drilling could result in structural weakening.

**TABLE 3
ROUND LOGS, POSTS AND POLES**

Wood Diameter	Common Standard Sz	Rod Size (dia x length)	Hole Size (dia x length)	Linear Space Between holes	No. of Rods Per Hole
100mm	4"	8 x 65mm	10 x 75mm	17.5cm	1
100mm	4"	12 x 50mm	14 x 70mm	35.0cm	1
150mm	6"	12 x 50mm	14 x 120mm	30.0cm	2
200mm	8"	12 x 50mm	14 x 145mm	17.5cm	2
150mm	6"	18 x 75mm	20 x 115mm	37.5cm	1
200mm	8"	18 x 75mm	20 x 125mm	30.0cm	1
250mm	10"	18 x 75mm	20 x 150mm	17.5cm	1
300mm	12"	18 x 75mm	20 x 225mm	25.0cm	2
350mm	14"	18 x 75mm	20 x 250mm	17.5cm	2
400mm	16"	18 x 75mm	20 x 300mm	22.5cm	3

In the interest of space, only metric sizes are shown here.

Note: Recommended application rates based upon rods installed in a linear pattern and preservative retention of 170g (6oz) BEA/cf (6kg/m³ BAE) for remedial treatments. In fence posts and vertical building poles, insert the recommended number of rods into holes drilled at a downward angle and within 15 cm (6 inches) of vulnerable ground line area.

**TABLE 4
HOW TO CALCULATE CUBIC CENTIMETRES (and cubic inches)**

Metric		Imperial	
Sawn Materials V = Ta x Wa x L	Round Materials V = J x r ² x L	Sawn Materials V = Ta x Wa x L	Round Materials V = J x r ² x L

V = Volume (i.e. cm ³) J = 3.14 Ta = Actual Thickness in centimetres Wa = Actual Width in centimetres r = radius in centimetres L = length in centimetres	V = Volume (i.e. cm ³) J = 3.14 Ta = Actual Thickness in inches Wa = Actual Width in inches r = radius in inches L = length in inches
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Important: Always use actual measurements instead of nominal sizes for sawn wood since actual sizes are smaller.

Examples of Treatment locations and Drill Patterns

Window Millwork

Use the smaller sizes of Impel (Boron) Rods (D) to protect window millwork, including: framing, sashes, sills, jambs, etc. The most vulnerable areas are the wood ends, joints and lower sections. The diagram illustrates how Impel (Boron) Rods (D) should be positioned in a typical wood window. Refer to Table 2 for the recommended rods sizes and spacings for the various wood dimensions. Install Impel (Boron) Rods (D) in the finish sill and bottom ends of side casing, as shown. Other vulnerable areas may include lower areas of sash, skylights and dormer casings.

Exterior Door Millwork

Install Impel (Boron) Rods (D) in the bottom areas of door framing as shown. Other areas of concern include the base of garage doors, crawl space access doors and their frames.

Posts (Cedar or Pressure Treated)

The ground-line sections of fence, deck and mailbox posts are most susceptible to wood decay. To protect these areas, Impel (Boron) Rods (D) should be installed within 15 cm (6 inches) of the ground line and angled downward toward the centre of the post, as shown in diagram. Refer to Tables 2 and 3 for the recommended rod sizes for various post dimensions.

Above Ground Porch Columns and Rails

Install Impel (Boron) Rods (D) in lower sections of rails, wood ends and joints, as shown. Impel (Boron) Rods (D) may be applied to square hollow columns through a series of 4 holes drilled through the thickest edges of the four side pieces as shown. Position rods within 15cm (6 inches) of base.

Roof Trim and Facia

Install Impel (Boron) Rods (D) within 15cm (6 inches) of fascia ends. Corners are most susceptible to decay due to end-grain absorption of moisture.

Foundation Construction

Check local building codes prior to installing Impel (Boron) Rods (D) in load bearing (joists) members. Install Impel (Boron) Rods (D) in foundation construction. Greatest hazards for decay are wood ends and joints due to end-grain absorption of moisture. Install within 15 cm (6 inches) of wood end at recommended spacings, as needed. Other areas of concern are where joists rest on block piers, band sills around dirt-filled porches, untreated deck headers, and foundation construction around chimneys.

Round Wood and Timber

DIAGRAM 1	DIAGRAM 2	DIAGRAM 3
(diagram)	(diagram)	(diagram)
Staggered Drill Pattern	Linear Drill Pattern	Angled Drill Pattern

Log and Timber Structures

Impel (Boron) Rods (D) 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. Diagram 5 and 6 below illustrate how Impel (Boron) Rods (D) may be positioned in a typical "butt and pass" corner section. Although corner construction varies widely, Impel (Boron) Rods (D) should generally be placed about 15 cm (6 inches) from the end of each log and in holes drilled across the wood grain, as shown.

(Diagram)

Typical Installation

Insert 18 x 75mm (3/4" x 3") Impel (Boron) Rods (D) into a 20 x 130mm (13/16" x 5") deep hole, as determined by log size in Table 3. Plug hole to leave a minimum 4mm (1/8") space between plug and rod.

Note: Installation at time of construction will allow for the vertical positioning in tip face of logs as shown in diagram so that drilled holes can be hidden between logs.

In base logs, install Impel (Boron) Rods (D) 15cm (6 inches) from each end at the recommended spacings along the log (See Table 3). In rafter and over hangs, install Impel (Boron) Rods (D) 15cm (6 inches) from each exposed end at a recommended spacings, as needed.

Butt and Pass Corner Construction

Diagram 5 (Diagram) Impel (Boron) Rods (D) positioned into holes drilled 15cm (6") from log end, 45E angle to side of log.	Diagram 6 (Diagram) Impel (Boron) Rods (D) positioned into holes drilled 15cm (6") from log end, 45E angle to top of log.
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