# ProBor™

## The Professional Solution for the Treatment of Dry Rot, Wet Rot, and Woodworm

*The "Cone House" at the Hotties Science and Arts Centre, St. Helens. Treated with ProBor Wood Preservatives.*

The ProBor Range of products are high performance timber preservatives formulated for use against both fungal decay and wood boring insects. They are designed to be especially effective against dry rot, *Serpula lacrymans,* and the wet rots.

ProBor products are based on a water soluble borate, a timber preservative that has been extensively researched over the past 50 years. They exhibit superb penetration into damp timber, hence they can be used in high risk areas such as embedded joist ends, lintels, wall plates etc.

- Long lasting protection
- Protect against woodworm and fungi
- Independently tested
- Particularly effective against dry rot and wet rot
- Deeply penetrating
- Low odour

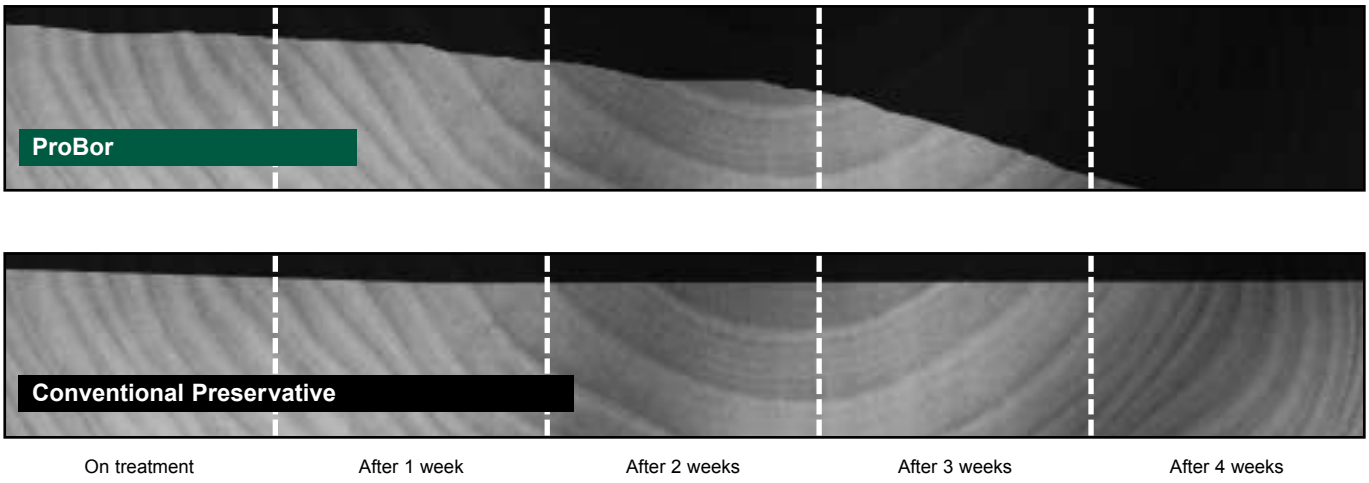
**TECHNICAL HELPLINE 01403 210204**

**www.safeguardeurope.com**

## How are ProBor products different?

ProBor products are able to penetrate into the timber through the cell walls which allows them to move much more deeply into the timber than conventional preservatives. This gives ProBor products an extensive performance advantage as no timber preservative can start working until it comes into contact with the insects or fungi that it is designed to defend against.

The picture below demonstrates the penetration of ProBor 10 into timber compared with a conventional preservative.




## Used and specified by the Professionals

The benefits of using ProBor products are well recognised by architects and those in the building restoration industry. They are often specified on high profile, prestigious projects where re-treatment is not an option. A selection of case studies can be downloaded from our website **www.safeguardeurope.com.**

In many situations, the high performance of ProBor products may allow original timbers to be retained that would otherwise have had to be replaced. This is obviously an advantage when treating historic buildings.

## The ProBor Professional Range

The ProBor Professional range is centred around three core products, ProBor 10, ProBor 20 Gel, and ProBor 50 Paste.

**ProBor 10** is a ready-to-use product that contains 10% active ingredient. ProBor 10 is a liquid and is designed for application by brush, dip or spray. It is suitable for the treatment of woodworm in all dry timbers and for the treatment of dry rot and wet rot in smaller dimension timbers (up to 19x38mm).

**ProBor 20 Gel** is ready-for-use gel containing 20% active ingredient. It is used for the treatment of dry rot and wet rot in larger dimension timbers (up to 225 x 75mm). It is also effective against woodboring insects, and is particularly useful when treating Deathwatch Beetle.

**ProBor 50** is a highly concentrated paste containing 50% active ingredient. It is supplied in a 400ml mastic cartridge and is normally injected into holes drilled into the timber. It is usually used for treating dry rot and wet rot in large dimension timbers. It is also useful for treating wooden window frames and joist ends, and makes an excellent masonry sterilant.

## Effectiveness against Dry Rot and fungal decay

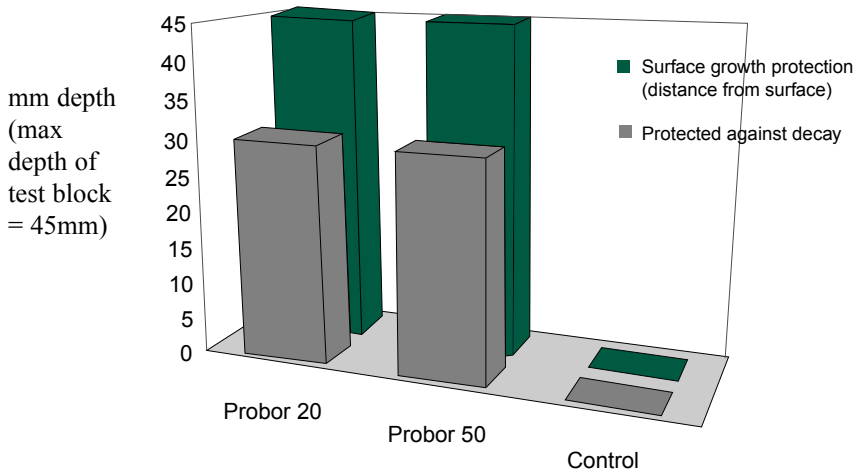
Removing the source of moisture should form the core of any dry rot or wet rot eradication strategy. However, it is not always possible or practical to be sure that the remaining timbers will remain dry in the long term. Therefore, it is important that any timbers at risk of fungal attack are treated with an effective fungicide.

The effectiveness of any borate based preservative depends on the levels of boron that can be deposited. Both ProBor 20 and ProBor 50 contain a high level of boron and this is distributed extremely effectively by the glycol carrier.

ProBor 20 and ProBor 50 have both been tested by a national independent testing laboratory in Norway, the tests also involving comparisons with other competitive products.
The report on their efficacy against dry rot states that, "The results from all four products [ProBor plus two reference materials] were excellent, as visible decay was only evident in the untreated control blocks."

Under the section 'Discussion' the report finds that, "The included products all had sufficient penetrating ability and toxicity to prevent decay from Serpula lacrymans in the full depth of the test specimens, i.e. 45mm"

The report concludes that, *the products tested "all work well under the test conditions. The depth at which the wood is protected even from colonisation from actively growing mycelium, suggest that timber surfaces properly treated with either of the products will be efficiently protected against colonisation by* ***Serpula lacrymans*** *or* ***Coniophora puteana****."*




Efficacy of ProBor 20 and ProBor 50 against dry rot

**Important Note:** Dry Rot can cause widespread structural damage. We recommend that a professional timber treatment company is called in to carry out a survey if Dry Rot is suspected. If you suspect Dry Rot, call 01403 210204, and we will arrange for an experienced treatment company to contact you.

## Effectiveness against insects

Because borates have been used for so long in wood preservation, an enormous amount of data has been compiled on their effectiveness against wood-boring insects.The following table is a summary of that data relating to wood-boring insects currently indigenous to the UK. Application of ProBor products at the rates recommended in this leaflet will achieve the loadings recommended in this data.

Borates need to be ingested by insects before taking effect. For this reason ProBor products are not as fast-acting as other woodworm treatments in our range - e.g. Soluguard.

Table 1 **Effectiveness of boron compounds against selected wood destroying insects: levels required to prevent attack by killing target organism.**

| Insect | Boric acid equivalent (BAE) | Reference |
|---|---|---|
| *Lyctus brunneus* *(Powder Post Beetle)* | 0.12 - 0.14%<br>0.33%<br>2kg/m³ in Oak | Cummins (1939)<br>Cann (1940)<br>Cann 1940) |
| *Anobium punctatum* *(Common Furniture Beetle)* | 0.04%<br>0.1%<br>0.1 - 1.9%*<br>0.46%<br>4.2kg/m³<br>0.87% | Spiller (1949)<br>McQuire (1974)<br>Taylor (1967)<br>FPRL (1957)<br>Becker (1959)<br>Becker (1959) |
| *Hylotrupes bajulus* *(House Longhorn Beetle)* | 0.23kg/m³<br>0.09%<br>0.45kg/m³<br>0.01% | FPRL (1957)<br>Becker (1959)<br>Becker (1959)<br>Taylor (1961) |

**High variability due to different test procedures (egg laying versus larval attack).*
Further data is available relating to foreign species of wood-destroying insects, particularly termites. A summary of this is available from our technical department

## The Range

Probor Glycol Borate Wood treatments are available in a number of different concentrations, each product has a different use:-

**ProBor™ 10**

***HSE No. 9404 (Professional use only)***
**Liquid Borate apply by brush, dip or spray**

### Our most popular borate preservative.

Ready-to-use liquid preservative to be applied by brush, dip or spray for treatment against wood boring insects and wood rotting fungi.

*Uses:*

- Treatment of small sectional timber, roof spaces etc.
- May also be used for treating larger dimension timbers against woodworm only.

*Features and benefits:*

- Ready-to-use liquid product
- Low odour.
- Excellent penetration – more thorough treatment.
- Apply by brush, dip or spray
- No hydrocarbon solvents.
- Dual purpose fungicide - insecticide

*Pack Size*

5 litres and 25 litres (ready-to-use).

## Application

| | APPLICATION RATE | APPLICATION BY | ACTIVE INGREDIENT | TIMBER DIMENSION: 6mm x 25mm | 25mm x 25mm | 19mm x 38mm | Sizes up to and including 50mm x 50mm | 50mm x 75mm up to and including 225mm x 75mm | Sizes above/ masonry other |
|---|---|---|---|---|---|---|---|---|---|
| **ProBor 10** Apply by brush, dip or spray. | 0.25 - 0.3 L per $m^2$ (0.27 Kg per $m^2$) |  OR | 10% |  |  |  |  |  |  |

*Where timbers are below 15% moisture content ProBor 10 can be used on all timber sizes against wood boring insect attack.*

## Application Instructions

ProBor 10 is ready-to-use.

- *Ensure that the operative responsible for application has read the relevant safety data sheet and is wearing appropriate safety equipment/protective clothing.*

### Preparation

ProBor 10 is intended for application to unpainted, unvarnished timber. All timber surfaces should be cleaned of dust as far as practically possible.

Apply by brush, dip or spray.

### Application as a Timber Treatment for the control of wood boring insects and wood rotting fungi.

- **Coarse spray**. 0.25 - 0.3 litres per square metre (0.27 kilos per square metre).
- **Brush**. Three liberal coats should be considered to be the equivalent to a coarse spray treatment.

**Storage of material**

We recommend that you keep ProBor 10 in a warm environment (above 10°C). If the temperature falls below this level there is a risk that crystals may form in the product. If this occurs, the product should not be used.

### Typical Fluid requirements

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **1) Roofs** | 2 Bed Terrace: | 15-25 litres | Guidelines only, | **2) Floors** | 2 Bed Terrace: | 15-25 litres | Guidelines only, |
| | 3 Bed Terrace: | 40-50 litres | Depends | | 3 Bed Terrace: | 40-50 litres | Depends |
| | 3 Bed Detached: | 50-65 litres | On | | 3 Bed Detached: | 50-60 litres | On |
| | 4 Bed Detached: | 75-90 litres | Porosity | | 4 Bed Detached: | 70-80 litres | Porosity |

# ProBor™ 20 GEL

***HSE No. 10108 (Professional use only)***
**Brush applied gel for large timbers**

Brush applied gel formulation for large section timbers. It is suitable for surface application (will not stain). Also particularly suitable for use against Deathwatch beetle.

*Uses:*

- Fungicide/Insecticide for large dimension timbers.

*Features and benefits:*

- Superior performance on wet and dry timber.
- Robust, no spill keg – avoids spillages.
- Extremely low odour – fewer complaints.

*Pack Size*

Ready for use material packed in 5 litre kegs.

## Application

| | APPLICATION RATE* | APPLICATION BY | ACTIVE INGREDIENT | TIMBER DIMENSION: 6mm x 25mm | 25mm x 25mm | 19mm x 38mm | Sizes up to and including 50mm x 50mm | 50mm x 75mm up to and including 225mm x 75mm | Sizes above |
|---|---|---|---|---|---|---|---|---|---|
| **ProBor 20** Ready for use brushable gel. | 0.44 L per $m^2$ (0.57 Kg per $m^2$) |  | 20% | | | |  |  |  |

ProBor 20 Gel is designed to be applied by brush directly onto the surface of the timber. The application should resemble a thick coating of gloss paint. Do not attempt to lay on thicker than this, or excess material may run off.

For effective results wood should be bare and clean. The gel will not penetrate through paint, varnish or other treatments which seal the surface of the timber and such coatings must be removed prior to treatment.

Apply a generous brushed coat, taking special care to ensure that end grain, corners, joints and crevices are treated. Brush apply to surfaces exposed by cutting after treatment.

(*This is sufficient to treat up to 100$cm^2$ in cross section. Large timbers may need more than one coat or an additional treatment with ProBor 50. *On dusty timbers it is recommended that the timber is 'wetted' by the application of sprayed water, this will stop the gel from 'balling'*).

# ProBor™ 50 PASTE

***HSE No. 9496 (Professional use only)***

**Paste formula for joist ends, inaccessible or large dimension timber.**

400 ml mastic cartridge – for use on very large dimension and inaccessible timbers.
For injection into timber/masonry for treatment against rot/insects.

*Uses:*

- Timbers – very large dimension/inaccessible.
- Joist ends.
- Window joinery.

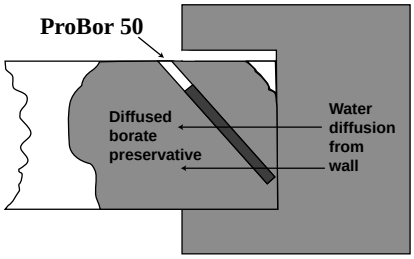
Please note - ProBor 50 is designed to be injected into timber. It can also be applied to the timber surface, but it should be noted that a white deposit will be left.

*Features and benefits:*

- Designed for deep impregnation into large dimension timber.
- Highly concentrated paste formula in cartridge – replaces dated boron rod technology. Minimises operative contact.
- Diffusion starts well below the 18-22% moisture content where wood becomes susceptible to dry rot – boron rods do not start to diffuse until >30% moisture content.

ProBor 50 is supplied as a clear, odourless, viscous gel-like formulation pre-loaded into a handy, ready-to-use cartridge to fit a standard mastic gun. Its main purpose is to be injected deep into the wood via pre-drilled holes thereby ensuring complete distribution of the boron preservative deep within the wood. In general we recommend 10mm diameter holes spaced no further than 150mm apart. The number of holes should be adjusted to achieve a product loading of 5.9 litres per $m^3$.

***The action of ProBor 50 boron paste***




## Application

| | APPLICATION RATE | APPLICATION BY | ACTIVE INGREDIENT | TIMBER DIMENSION: 6mm x 25mm | 25mm x 25mm | 19mm x 38mm | Sizes up to and including 50mm x 50mm | 50mm x 75mm up to and including 225mm x 75mm | Sizes above/ masonry other |
|---|---|---|---|---|---|---|---|---|---|
| **ProBor 50** Gun applied paste formula. | 5.9 L per $m^3$ (8.0 Kg per $m^3$) | | 50% | | | | | | |

## General

| | |
|---|---|
| Warning: | Do not use on painted, varnished or polished timbers. |
| Painting: | Once timbers have dried, fillers and glues can be used to prepare timbers for painting or varnishing with certain oil or water based products. Please contact our technical department for further details. |
| Cleaning: | Tap water will clean all tools, brushes etc. and wash down spillages. |
| Shelf life: | 6 months in cool, dry conditions. |
| Storage: | Store in original containers and keep tightly closed. Do not allow to freeze. |
| Health & Safety: | For full health and safety data consult the material safety data sheet available on request. |

ProBor™

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