



TREATED TIMBER & PLYWOOD CODE OF PRACTICE

Helping you make the most of timber

DEFINITION

Vacsol® Aqua treated timber is timber which has been impregnated with Vacsol® Aqua water based wood preservative under controlled conditions in a double vacuum/low pressure timber impregnation plant (Vac-Vac® plant). This results in a highly effective envelope of treatment.

Vacsol® Aqua is a water based wood preservative that contains organic active ingredients (triazole fungicides and an insecticide). It conforms to European Standards for the treatment of construction and joinery timbers and provides long term protection for both internal and external (above ground contact) timbers.

Vacsol® Aqua treated timber must only be used above the dpc level and/or above ground contact. Exterior joinery/woodwork must be subsequently protected with a maintained surface coating.

In termite areas, Vacsol® Aqua treated timber should be used above the termite shield.

This document provides guidance on using Vacsol® Aqua treated timber within the UK. For other geographic markets, additional relevant regulations and requirements may need to be considered.

VACSOL® AQUA WOOD PRESERVATIVES

Vacsol® Aqua wood preservatives are approved for use as directed under the Control of Pesticides Regulations (COPR) by the UK Health & Safety Executive. The biocides contained in Vacsol® Aqua wood preservatives are being supported under the Biocidal Products Directive.

SPECIFICATION

Consult the Arch Timber Protection Specifier's Guide to Vacsol® treated timber.

It should be noted that the treatment process parameters are varied, taking into account timber species, desired service life and to match the end use (Use Class) of the timber. It is therefore extremely important that the end use and species of the timber are clearly stated within the specification. Use Classes are defined in BS EN 335-1 but can be summarised as follows:

- Use Class 1 - internal building timbers - no risk of wetting.
- Use Class 2 - internal building timbers - risk of wetting.
- Use Class 3.1 - external timbers used above ground contact and coated.
- Use Class 3.2 - external timbers used above ground contact and uncoated.
- Use Class 4 - external timbers used in ground or fresh water contact.

APPEARANCE

After the application of Vacsol® Aqua wood preservative by the Vac-Vac® process, the appearance of the timber is virtually unchanged. However, a colourant is often included to facilitate identification of treatment.

Experience has shown to date that there is no particular problem with grain raising. However, as with all water based products, there is potential for this to take place.

Colour variations may occur due to the natural variability of the relative proportions of heartwood and sapwood and darkening of some hardwoods may occur.



TREATED TIMBER

APPEARANCE (continued)

Trials should be carried out on decorative timber species (particularly hardwood species) to check any shade changes prior to treatment of the full commercial batch. Further information can be obtained from the Arch Timber Protection Advisory Service.

CONFIRMATION OF TREATMENT

Customers are recommended to obtain a Certificate of Treatment covering their orders. These are available from the processor.

Please note that the treatment process parameters are varied according to the timber species and end use of the treated timber commodity, taking into account the potential for biological degradation.

PREPARATION OF TIMBER FOR TREATMENT

Present the timber to the treatment plant in a dry and clean condition as follows:

- Dried to a moisture content of 28% or less.
- All inner or outer bark should be removed.
- Free from dirt, sawdust, surface coatings, surface water, plastic wrapping, ice and snow.
- Free from all signs of attack by bacteria, blue staining fungi, wood destroying fungi or insects.
- As far as possible, all cutting, machining, planing, notching and boring is to be carried out prior to treatment - (see section on post-treatment machining).
- DO NOT attach metal fittings prior to treatment.
- DO NOT excessively tighten any banding around the timber pack.
- Use sticker-stacked pack configurations to optimise post-treatment drying.
- DO NOT treat timber wrapped in polythene.
- DO NOT treat frozen timber.
- Sheet materials, e.g. plywood, should be stickered at least every second layer before treatment.
- Ideally timber and sheet material should be sloped in the treatment vessel to aid preservative run off during final vacuum of the treatment process. This promotes good post-treatment drying.
- Excessive tight banding on timber packs, on bogie strapping and on planed dressed material, should be avoided.
- Where close tolerance work is involved it is advisable to pre-machine the timber at the 'in-service' equilibrium moisture content. It is then the contractor's responsibility to ensure that the need for re-drying is recognised and allowed for.

POST-TREATMENT STORAGE AND ON-SITE PROTECTION

When received, Vacsol® Aqua treated timber should be free from surface liquid. Drying will be accelerated when stored in a well ventilated, weather protected area.

Impregnation of timber with Vacsol® Aqua imparts a low moisture uptake. This may cause slight swelling across the end grain surfaces. If this occurs treated material should be stored, open stacked, to provide sufficient ventilation for moisture to evaporate. The timber will re-dry to its original dimensions when placed in the same temperature and humidity conditions in which it was machined and profiled prior to treatment.

Flat items such as sheets of plywood should be separated and either stickered horizontally or stacked more or less vertically, with air space between them to promote drying.

Building components stored on a building site should be clear of the ground and stacked and protected so that they are not distorted or saturated by rainwater.

POST-TREATMENT MACHINING

Some cross-cutting on-site is unavoidable. This will expose an untreated core and it is imperative that cross-cuts, notches and bored holes be liberally swabbed with Vacsele® end grain preservative to maintain the integrity of the preservative protection.

Rip sawing, grooving, planing and heavy sanding are not permitted unless the timber is returned for re-treatment to maintain the integrity of the preservative protection.

GLUING

PRE-TREATMENT

Assemblies which are to be treated with Vacsol® Aqua wood preservative may first be glued using a suitable waterproof adhesive. Consult the glue manufacturer on the suitability and use of their particular product and follow the directions of the appropriate regional standards.

Melamine urea formaldehyde, emulsion polymer isocyanate, melamine formaldehyde and phenol resorcinol formaldehyde types are generally used.

Polyvinyl acetate, Casein, or urea formaldehyde types are NOT recommended.

It is important that the glue lines should be fully cured as required by the glue manufacturer, usually several days before the assembly is sent for treatment.

Where enclosed cavities are involved, access holes must be drilled to permit the entry and exit of preservative solutions.

Plywood may be treated provided it is of an appropriate grade - see section on typical applications.

Timber which is to be bonded prior to treatment with Vacsol® Aqua should be glued using a suitable waterproof adhesive e.g. Resorcinol Formaldehyde, Phenol Formaldehyde, Kascanite and exterior PVA glue. The glue manufacturer's recommendations should be followed at all times and sufficient time allowed for glues to cure properly before treatment.

POST-TREATMENT

Vacsol® Aqua treated timber may be bonded with a range of adhesives, including the following:

Resorcinol Formaldehyde or Phenol Formaldehyde

Urea Formaldehyde

PVA emulsion

When bonding preservative treated timber, care should be taken to prepare the surfaces prior to application of the adhesive.

The glue manufacturer's instructions should be followed at all times.

Where impact adhesives are to be used or highly stressed glue joints are to be made (e.g. 'Glulam' beams) using Vacsol® Aqua treated timber, advice should be sought from the Arch Timber Protection Advisory Service.

PUTTIES, MASTICS & SEALANTS

Reference should be made to BS6262, Code of Practice Glazing for Buildings.

The choice of putties, mastics and sealants is dictated by the characteristics of the primer/basecoat used. It is not influenced by the fact that the timber has been Vacsol® Aqua treated.

Where any doubt exists advice should be sought from the manufacturer of the putty, mastic or sealant in the first instance and then from Arch Timber Protection.

SURFACE COATINGS

Over absorbent timber may adversely affect decoration. Care should be taken to ensure adequate drying of timbers suspected of over absorbency or thin timbers, e.g. cladding and beading, before any surface coating is applied.

Arch Coatings UK (Tel 01977 673363) supplies a range of solvent and waterbased primers and basecoats which are compatible with Vacsol® Aqua treated timber. These are recommended for use when factory finishing is envisaged. When other coatings are to be used the advice of Arch Timber Protection and the coating manufacturer should be sought.

The following notes apply to common painting practice.

SOLVENT BASED DECORATIVE COATINGS

i) Vacsol® Aqua treated timber

Freshly treated Vacsol® Aqua timber should be allowed to dry for 48 hours, open-stacked in an under cover, well ventilated area, prior to application of primer or basecoat e.g. Hickson Predec (see section on over absorbency). For this air drying time, the timber should be open-stacked and in a well ventilated area.

- a) Where acrylic primers are to be used, it is advisable to carry out a simple test to establish compatibility.
- b) When using aluminium leafing primer, longer periods of drying may be necessary after Vacsol® Aqua treatment due to the sealing characteristics of this type of coating.
- c) A further 7 days should elapse before the final paint or stain finishes are applied, allowing normal drying time before applying each coat.

ii) Vacsol® Aqua treated plywood

The time allowed between treatment and priming depends upon drying conditions, the types and thickness of plywood used and the amount of preservative absorbed during treatment. Before applying a basecoat, it is recommended that at least 72 hours be allowed from the time that the sheets of treated plywood are separated for drying under favourable conditions, and that a further 7 days elapse before final paint/stains are applied.

WATER BASED DECORATIVE COATINGS

i) Vacsol® Aqua treated timber

Freshly treated Vacsol® Aqua timber should be allowed to dry for 48 hours, open-stacked in a well ventilated area, prior to application of a primer or basecoat. A further 7 days should elapse before the final paint or stain finishes are applied, allowing normal drying time before applying each coat.

ii) Vacsol® Aqua treated plywood

The time allowed between treatment and priming depends upon drying conditions, the types and thickness of plywood used and the amount of preservative absorbed during treatment. Before applying a basecoat, it is recommended that at least 72 hours be allowed from the time that the sheets of treated plywood are separated for drying under favourable conditions and that a further 7 days elapse before final paint/stains are applied.

METAL FIXINGS & FITTINGS

i) Vacsol® Aqua treatment has no corrosive effect on mild steel fixings and fixtures.

The timber must be at a moisture content below 20% before mild steel fixings and fittings are applied and must remain below 20% in service.

- ii) Where higher moisture contents (above 20%) are expected in service, galvanised steel, stainless steel, copper, aluminium or brass fixings and fittings should be used. At least 24 hours should elapse after treatment before these fixings are applied.
- iii) For trussed rafter manufacture, the provisions of BS 5268: Part 3 should be followed. Trussed rafters should be stored on-site and out of ground contact. Rafters should be protected in accordance with Section 7 of BS 5268, if the storage time exceeds two weeks.
- iv) Zinc sheeting can be applied to Vacsol® Aqua treated timber so long as the timber is completely dried - less than 28% moisture content.

FLOOR COVERINGS AND PLASTERBOARD/ABSORBENT COMPOSITE BOARD MATERIALS

Where Vacsol® Aqua treated timber is to be in contact with floor coverings, plasterboard or other absorbent material, care should be taken to ensure adequate moisture evaporation has taken place prior to fixing, otherwise the substrate may absorb excess Vacsol® Aqua solution (see section on over absorbency).

If necessary, the moisture content of the timber should be checked. However it should be noted that moisture meters may be affected by preservative treatment. Moisture meters with insulated probes should therefore be used.

TYPICAL APPLICATIONS

If in doubt about any particular area of application or compliance with other relevant standards or specifications, it is advisable to consult with Arch Timber Protection using the contact details given in this document.

This list, which is not totally exhaustive, gives an indication of the range of timbers and timber based products which can be treated with Vacsol® Aqua wood preservative. The treatment process parameters are varied to match the end use of the timber and its species. It is therefore extremely important that you make sure that the timber has been treated to the correct specification.

HARDWOOD EXTERIOR JOINERY

Hardwood window frames and casings, exterior doors and frames.

PLYWOOD

Under previous systems WBP (weather and boil-proof) grade plywood was classified under BS1204. This standard has now been withdrawn.

Now plywood grades are based on BS EN 636 (Dry, Humid and Exterior classifications), which themselves are based on bonding classes 1, 2 and 3 from BS EN 314 Part 2. Plywood that is either WBP or BS EN 636 Exterior grade (BS EN 314 Part 2 bonding class 3) should now be specified. Humid grade (bonding class 2) might be acceptable, but the board manufacturer or supplier should be asked to confirm that Humid grade board can be put through a double vacuum (Vac-Vac®) treatment process.

EXTERNAL BUILDING TIMBERS

Structural elements and general timbers in domestic, commercial and public buildings, such as wall frames, sole plates, beams, joists, sub-floors, roof timbers, battens, cladding, roof shingles.

SOFTWOOD EXTERNAL JOINERY

Softwood window frames and casings, soffits, barge and fascia boards, cladding, load bearing joinery and doors.

MISUSE

DO NOT USE VACSOL® AQUA TREATED TIMBER IN THE FOLLOWING SITUATIONS:

1. Below dpc and/or in ground contact.
2. In termite areas below the termite shield.
3. In direct contact with foodstuffs.
4. In an exterior situation without a protective coating.

Note: In the situation where Vacsol® Aqua treated timber is exposed to high humidity and condensation (e.g. swimming pool roofs), it is recommended that the timber is coated with an appropriate coating containing an effective anti-blue stain biocide.

OVER ABSORBENCY

Occasionally, a parcel of timber will contain some pieces which have an abnormally permeable sapwood. Such pieces should be placed on one side for prolonged drying before overpainting/staining or the fixing of porous materials which may absorb the excess solution and adversely affect subsequent decoration.

HEALTH, SAFETY, HANDLING AND DISPOSAL

Reference should be made to the Consumer Information Sheet for Vacsol® treated timber and plywood. This is available from the Arch Timber Protection Advisory Service. The Consumer Information Sheet is also relevant for COSHH purposes.

FURTHER INFORMATION

Consumer Information Sheet for Vacsol® treated timber.

Specifier's Guide for Vacsol® treated timber.

For further information, please contact the Arch Timber Protection Advisory Service at the address below.

Arch Timber Protection Limited has produced this Code of Practice for information only. Whilst every attempt has been made to ensure the accuracy and reliability of the information contained in this document, Arch Timber Protection Limited gives no undertaking, warranty or promise that the information is correct and customers should take all reasonable precautions to ensure the use and application of Vacsol® Aqua treated timber, as the case may be, is fit for the customers or end users' particular purpose. Arch Timber Protection Limited expressly disclaims and excludes all warranties, conditions, representations and terms, whether expressed or implied by statute, common law or otherwise with respect to the information contained in this document or the subject matter thereof. Arch Timber Protection Limited reserves the right, at its sole discretion, to amend or withdraw any information contained in this document but does not undertake any duty to update such information.

This Code of Practice does not form part of any contract between Arch Timber Protection Limited and its customers and is not intended to give rise to any rights or cause of action for the customer against Arch Timber Protection Limited. This Code of Practice is for guidance only and the customer is advised to seek its own advice as to whether the products mentioned in the document are fit for the customer's particular purpose and are safe to use, store and handle in the circumstances contemplated by the customer. This Code of Practice does not negate any exclusions of liability of Arch Timber Protection Limited in the contract of sale for its products.

This Code of Practice has been written for businesses purchasing Vacsol® Aqua products from Arch Timber Protection Limited. The customer is advised to read the Code of Practice in full as it contains important information, but the customer needs to decide for itself whether or not the product is suitable for its or the end users' particular purposes and should ensure that its employees, contractors and others working for it and who will use the products do so in a safe manner. This document is intended for use by businesses only and is not intended to be used by retail consumers.



**Arch
Timber
Protection**

Wheldon Road, Castleford, West Yorkshire, WF10 2JT.
Tel: (01977) 714000 Fax: (01977) 714001
E-Mail: advice@archchemicals.com www.archtp.com

IN CASE OF EMERGENCY TELEPHONE (0208) 762 8322 (24 hours).



BS EN ISO 9001:2000
Reg No FM 1636



BS EN ISO 14001:2004
Reg No EMS 539413

© Copyright 2008 Arch Timber Protection.

© Vacsol, Vac-Vac and Vacsele are registered trademarks of Arch Timber Protection.

Arch Timber Protection updates its literature as and when necessary. Please ensure you have an up to date copy.



Responsible Care