



Vacsol Aqua



Definitions

VACSOL Aqua treated timber is timber which has been impregnated with VACSOL Aqua wood preservative under controlled conditions in a double vacuum/low pressure timber impregnation plant (VAC-VAC plant).

VACSOL Aqua is a waterbased wood preservative that contains proven organic active ingredients.

VACSOL Aqua treated timber gives long term protection against fungal and insect attack, for both interior and exterior (above ground contact) construction timber and joinery applications, when treated to the correct end use specification.

VACSOL Aqua treated timber must only be used above the damp proof course level and/or above ground contact. Exterior joinery/woodwork must be subsequently protected with an appropriate and maintained surface coating.

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

The appearance of VACSOL Aqua treated timber following treatment is virtually unchanged. However, a colourant is often included to facilitate identification of treatment.

Companies operating timber impregnation plants require a permit to operate from the appropriate local/regional approving authorities which are country specific. The size and throughput of the impregnation plant installation will dictate the required level of permissions. Lonza can provide more information, if required.

Vacsol Aqua Wood Preservative

VACSOL Aqua wood preservatives are approved for use by the relevant regulatory authorities in the markets they are used. The biocides contained in VACSOL Aqua wood preservatives are being supported under the Biocidal Products Regulation.

Biocidal Products Regulation - Treated Timber Labelling

As part of the Biocidal Products Regulation it is now the responsibility of suppliers of preservative treated timbers who are first putting the product on the market within the European Union to label the treated timber with information relating to the claimed protection, the active biocidal ingredients the preservative contains and relevant end use phrases for the treated timber. This information should also be in the relevant language for the intended market for the treated timber. Lonza can assist VACSOL Aqua preservative treaters with print ready artwork for these labelling purposes.

CE Marking

As part of the Construction Products Regulation the CE marking of permanently installed preservative treated construction timbers is now required. Contact Lonza directly for further guidance if required.

Treatment Specifications

VACSOL Aqua treatment process parameters can be 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 treatment specification. Use Classes are defined in EN 335:2013 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 coated - external timbers used above ground contact and coated.

In accordance with EN 335:2013 Use Class 3 can also be sub-classified as 3.1 and 3.2 respectively. The interpretation of these sub-classes may vary from country to country.

VACSOL Aqua treated timbers can be produced to meet the requirements of Use Classes 1, 2 and 3 coated.

Technical Data Sheets

A technical data sheet for VACSOL Aqua product will be supplied by Lonza prior to commissioning which will give specific information on the use of the product. This technical data sheet will be formulation specific and should be consulted by the treatment company as a working guide.

It is the responsibility of the treatment company to ensure all relevant permits and risk assessments are in place and current when using VACSOL Aqua and associated additives.

Preparation of Timber Prior to Treatment

For VACSOL Aqua treatment timber should be presented to the treatment plant in a dry and clean condition as follows:

- Generally dried to a moisture content less than the fibre saturation point, around 28%.
- All inner or outer bark should be removed.
- Timber should be free from dirt, sawdust, surface coatings, surface water, plastic wrapping, ice and snow.
- Timber should not be frozen, generally temperature greater than 5°C.
- Timber should be 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.
- If possible tilt the timber packs on the treatment plant bogie.
- Use sticker-stacked pack configurations to optimise post-treatment drying.
- DO NOT treat timber wrapped in polythene.
- 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.
- 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.

Treated Timber 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.

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 Lonza Advisory Service.

Confirmation of Treatment

End customers may require a Certificate of Treatment covering their treated timber orders. Electronic Certificates of Treatment are available from Lonza for treatment companies to utilise, if required.

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.

Post-Treatment Storage and Collection of Treated Timber

Following treatment, VACSOL Aqua treated timber must be stored at the treatment plant site until dry, before it can be despatched and used. This storage should be in a designated drip dry area, protected from rainfall and direct sunlight. The drying time will depend upon weather conditions, species, specification, timber dimensions, pack size, stickering and whether the timber is sawn or planed. Local regulations may also apply.

Treated packs should be tilted to promote preservative drainage and prevent surface ponding. It is advisable to stack packs evenly to prevent dripping onto lower packs as this could cause temporary but unsightly tide marking on the timbers below.

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.

Liaison between the customer and the supplier is necessary to determine when the timber will be ready for collection.

Post-Treatment Drying

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.

Timber for air drying should be open stacked under ventilated conditions and protected from rain and snow to promote post-treatment drying.

DO NOT wrap wet treated timber in polythene or other such materials as this will significantly extend the drying period.

Post-Treatment Machining

As far as possible all cutting, machining, notching and boring is to be carried out prior to treatment.

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 an approved end grain preservative to maintain the integrity of the preservative protection.

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

For more information on end grain preservatives contact the Lonza Advisory Service.

Treatment of Pre-Glued Assemblies

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 Treatment of Plywoods.

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.

Treatment of Plywoods

Under previous systems WBP (weather and boil-proof) grade plywood was classified under Standards which have now been withdrawn.

Plywood grades are based on EN 636 (Dry, Humid and Exterior classifications), which themselves are based on bonding classes 1, 2 and 3 from EN 314 Part 2. Plywood that is either WBP or EN 636 Exterior grade (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.

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 Lonza 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.

Plywoods

See Treatment of Plywoods section for more details.

Internal And 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.

Health, Safety, Handling And Disposal

All relevant health and safety information for working with VACSOL Aqua wood preservative, including a product safety data sheet, a Be Safe Poster and an Emergency Procedures Poster will be supplied by Lonza on commissioning of the product.

Please ensure that you have read and understood the associated Safety Data Sheets supplied by Lonza prior to using this product and associated additives.

Waste Disposal

Empty containers/IBCs should be washed clean (washings may be used to dilute solution concentrate) and disposed of by a method approved by the local waste disposal authority. In many EU countries a return service is in operation by the IBC supplier.

VACSOL Aqua treatment process wastes e.g. redundant solution and contaminated sludges are potentially hazardous waste depending on the product concentration in the waste. They should be consigned through registered waste handlers. The safety data sheet for the product should be shown to the handler together with an estimate of the concentration of product concentrate in the waste to enable the correct disposal route to be identified.

As with all biocide containing products, care should be taken to ensure that the product does not enter the environment through soil or water courses.

In the event of an Emergency

A 24 hour emergency line is in operation in support to Lonza customers and should be contacted in the event of an accident or environmental emergency.

In case of emergency telephone +44 (0) 1235 239670 (24 hours)

Use biocides safely. Always read the label and product information before use.

Further Information

VACSOL Aqua Treated Timber User Guide.

For further information please contact Lonza Customer Services at the address below.

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

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