

BALCOTAN 100 & RAPID BALCOTAN 100

BALCOTAN 100 IN THE UK.

Since the introduction of Balcotan 100 to the UK in 1990 woodworkers of all kinds have come to appreciate one of the most versatile glues available on the market. The motivation to import Balcotan 100 stemmed from years of shipwright work in Europe where this adhesive had been available there for over a decade, and became so much of everyday use that to be without it was unthinkable.

Now in the U.K, Balcotan 100 is recognised and appreciated for being easy to use. All that is needed to get to work is there in a bottle, no additional chemistry set (and the corresponding cash) required! Balcotan 100 is now an essential part of the gluing repertoire of woodworkers in Britain, working as sculptors, boatbuilders, turners, cabinet makers, furniture restorers, conservatory manufactures, propeller makers, joiners, roofers, on site chippies etc. as well as a huge number of amateurs who have recognised that gluing need not be a process dominated by thermometers, de-humidifiers and the expensive left over mustard syndrome! Gluing with Balcotan 100 is a simple science which involves pouring on as much glue as is needed on to one side of the work to be glued, clamping it together (without panic) in the knowledge that the glue will set irrespective of whether it is the middle of winter or the middle of summer.

MORE SPECIFICALLY...

Balcotan 100 is available in **two** formats: **Rapid** and **Regular**, both of which can be used in very cold temperatures and up to whatever our summers can throw at us. Practically speaking though the recommended minimum temperatures for working with both is +5°C with 80% humidity.

Rapid Balcotan 100 cures in 30-60 minutes with an open joint time of 10-15 minutes.

Balcotan 100 cures in about 3-6 hours with up to 90 minutes open joint time.

These two formats allow the option of plenty of time to assemble a more complicated or larger piece of work or the real possibility of finishing a job on the same day.

Both **Rapid** & **Regular** have the **same strength**.

The maximum strength of a glued joint is achieved by well fitting, well clamped surface brought together within the open joint time. It is worth remembering that the surface area glued also plays a large part in the strength of a glued joint. For instance, the

length of a scarf, the length of a tenon etc...

We have been asked many times "*How can Balcotan 100 be a one component glue and yet be 100% water proof?*" The answer is simple:

Balcotan 100 is not soluble in water. It uses the humidity of the air and the moisture in the material being glued as a catalyst which activates curing without diluting the glue and weakening the adhesive qualities.

SAFETY IN THE WORKING ENVIRONMENT

As curing doesn't take place by evaporation or absorption, **no solvents** are necessary in the adhesive. In addition it is **not a fire hazard** so the work place is safer.

Polyurethanes may cause breathing difficulties when vaporised in the air. However the vapour pressure of Balcotan 100 is so low that it releases **no dangerous vapours** into the work space.

CHARACTERISTICS OF BALCOTAN 100

Like all polyurethane adhesives, Balcotan 100 foams as it cures. However it is uniquely formulated to regulate the amount of foaming that takes place, which protects the joint from undue pressure.

The controlled foaming action means that:

- 1.** Glue only need be applied to one face; the expanding action will wet the other surface when the two are brought together.
- 2.** Crevices in the wood, the bottom of splines and tenons and small spaces between glued faces are automatically filled without having to unduly "load up" a loose joint.

This is particularly useful where say, the joints of a piece of furniture are being glued after it has been stripped in a caustic bath, or, where multi-laminate (cold moulded) hulls are glued up, the foaming property inhibits voids being left between the layers, and the consequent overall adhesion endures structural integrity. With laminated veneers it is recommended that their thickness should be 1.6mm minimum for staple fastened lay up at 45mm Centres.

- 3.** Because the expanded adhesive is a foam, and not a structural resin epoxy, it is not recommended as a structural filler.

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PRACTICAL TIPS

1. It is best to apply the glue using a spatula with 2mm serrations rather than a brush. This makes covering large areas especially easy. Spread rate is 150-200gm/m².
2. Use a barrier cream on your hands before starting to glue. Gloves give even better protection. There are no known cases of sensitization caused by Balcotan 100, but individual sensitivity cannot be ruled out. In the event of getting glue on hands the scrubbing with soap and a pumice stone will remove it.
3. Balcotan 100 is best stored cool and sealed. Regular Balcotan 100 has a shelf life of a minimum of eight months and Rapid stores for six months.
4. Balcotan 100 is resistant to freezing temperatures although it may partially crystallize when stored in temperatures below 0°C. If this happens, slowly warm the glue up to 30°C stirring gently. Keeping the glue slightly warm makes it flow better on cold days.
5. Expansion of the adhesive also takes place at the edges of the joint and will ooze out until it is sufficiently set. It is best therefore not to clean up the glue line until it has set.
6. The glue sets into a consistency which is flexible and tough, not brittle or crystalline. This allows a very easy clean up of the glue line. Cutting blades remain sharp longer as a result. Cleaning up the concave side of a stripped planked hull for example becomes a quick and simple job. Turning, carving or planing glued up components doesn't create hard veins in the work, saving both time and tools.
7. Balcotan 100 is honey coloured and blends in even with dark timbers. It does not stain or react with the wood. It takes stains to a degree and is completely compatible with glass/epoxy re-in forcing and finishing processes in use today in all industries. (If in doubt please contact us.)

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We have no minimum order, so if at any time you find yourself short of a few screws, a single length of timber, or glue etc, we can normally send it by post or by carrier the same day. Orders can be placed by **Post, Phone, Fax or E-mail**. If you would like details of our bulk rates, a quotation, or any other information, please contact our sales office on the address below.



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8. Balcotan 100 is resistant to weak acids, alkalis and a large number of organic solvents.

SUITABLE MATERIALS AND EXTREME APPLICATIONS

Balcotan 100 will successfully bond all timber, woodfibre boards, plywood, cork, expanded polystyrene panels and cement based boards as well as certain resin sheets where one of the materials being used contains moisture.

Although Balcotan 100 is not a plastics adhesive it has proved extremely successful in bonding rigid formed plastics such as polystyrene, PVC and polyurethane to moisture containing substrates such as timber, wood based boards, asbestos and cement-based boards.

Do not use timber with more than 25% moisture when gluing with Balcotan 100. If glued piece is transferred to a drier environment the inevitable shrinking of wood creates stresses which could deform a piece, cause it to crack or split at the joint. Green Oak does not glue well with Balcotan 100 as the strongly acid tannin in the unseasoned oak reacts with the adhesive.

Balcotan 100 is recommended for the use in cold and damp conditions, and has been used for gluing the laminates of sledges used by the ice patrols of northern Greenland (working temperatures down to -60°C) and structural glue-laminated beams of ice skating rinks in Switzerland.

Sunlight (ultra violet) harms the adhesive film only where direct contact occurs. The rays are not transmitted through the glue line.

SUPPORT

We are able to offer support and advice on the use of Balcotan 100 based on our experience. We also have the technical back up from the manufacturer.

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