

CASCAMITE

DESCRIPTION

Powdered urea/formaldehyde resin glue that satisfies the requirements of BSEN 204 durability class D3 and BS EN 302-1 A3 type 11 adhesive if mixed in the proportions specified.

Cascamite The original powdered resin wood glue, with gap filling properties, ensures weatherproof joints every time. Ideal for exterior and interior joinery and all cabinet work. It attains bond strength very fast, enabling it to be used for load bearing and laminating.

Use where high bond strength, gap filling, high water resistance is required.

ideal to use on • exterior joinery • windows • doors • gates • garden furniture • shopfitting • interior joinery • kitchens • worktops • bathrooms • veneering • laminating

AREAS OF USE

General Joinery, Cabinet Work, Shop Fitting, Veneering, Internal boat building, all external Joinery.

ADVANTAGES

Simple mix with water

Gap Filling

High Water Resistance

Interior or Exterior Use

Easy to Mix

Non-Staining

Mould Resistant

Stronger Bond Than The Wood Itself

tack time: 5 hours at 10°C, 2 hours at 20°C, 1 hour at 30°C

cure time: 27hours at 10C 12 hours at 20C 3 hours at 30C check remainder of mixed glue, cured when hard

MIXING

By Weight.

Use 2 parts of Cascamite powder to 1 part of cold water.

Mixing by weight is recommended for accurate and consistent glue mixes.

Do not use copper, iron, brass or steel containers for mixing. Plastic is ideal.

Add Cascamite powder to water, stirring rapidly until the powder dissolves.

Any small lumps will quickly dissolve.

It is advisable to allow the mixture to stand after mixing to allow entrapped air to escape, bubbles or foam in a glue line can cause a weak bond. Cascamite is now ready for use. The mixture will remain usable for approx. 3 hours at 15°C

At higher temperatures the usable life is reduced and in hot weather it is advisable to mix only sufficient glue for immediate use (standing the mixing vessel in cold water will extend the usable life).

APPLICATION

Joints should be smooth and well fitted. Apply the glue using a stiff brush to one surface only.

Assemble leave for short period especially on hardwood to enable the glue to penetrate and clamp (pin or screw) the joint whilst glue is wet.

Keep the joint under pressure until set

A damp cloth can be used to remove excess wet adhesive.

NOTE: - At temperatures below 10C (50F), gluing is not recommended. A period of up to 2 or 3 days may be required before the glue sets. During cold weather, it is therefore essential that joints under pressure be kept in a warm place.

Coverage should be 100 to 250 grams/sq. metre

Further information may be obtained from:

Polyvine Limited, Vine House, Cheddar Business Park, Wedmore Road, Cheddar, BS27 3EB

Tel 01934 740305 • www.polyvine.com • email info@polyvine.co.uk

NOTE: - If bonded wood is to be turned on a lathe it is recommended that the bonded wood is seasoned for a minimum of one week before turning.

USE OF PRESS ON ADHESIVE

The press pressure influences penetration of adhesives because it is the driving force for hydrodynamic flow. The pressure applied on the adhesive will force it to spread and penetrate into porous, fibrous material and into the roughness of the surfaces. The bond quality is affected by the amount of adhesive penetration into wood substrate during manufacture. An optimum adhesive penetration is needed to provide a reliable glue line thickness (GLT).

The press pressure is one of the main factors to control the GLT in addition to adherent, adhesive, machining, and adhesive spreading. GLT should be controlled because it directly affects the strength of bonding. One of the most important reasons for the occurrence of a thick glue line is insufficient pressure in the gluing process. Generally, thick glue lines lack strength. Pressure must be applied uniformly and adequately because synthetic resin based structural wood adhesives are not able to form strong bonds in thick and variable thickness glue lines.

The GLT's for wood joints are generally between 0.127 and 0.178mm. Optimum press pressures should be determined in relation to GLT. In low-density woods, high pressure forces the adhesive so deeply into the wood that there is insufficient adhesive to fill the bond-line, and it may cause over-penetration and inferior bond strength. On the other hand, low pressure causes a decrease in shear strength, does not provide close contact between the surfaces, and glue line remains partly poor.

The optimum press pressure was found to be 12.5kg cm.

It may be risky to use pressure higher than 12.5kg cm or lower than 7.5kg cm at this level of spreading rate and heat with the UF adhesive because of possible bonding and joint starvation problems, respectively.

The press pressure may depend on wood species, the moisture content of wood, adhesive properties, other press parameters, factory conditions, and strength requirements.

We recommend tests be conducted to establish the customers optimum press pressures.

BONDING TIPS

1 Ideally the moisture content of the substrates should be $9\% \pm 2\%$ with no more than 3% difference between the two surfaces to be bonded, otherwise stresses are built into the joint, which may result in wood or joint fracture. If the wood is too damp, the dilution effect will weaken the adhesive performance.

2. Although the workshop conditions may be above 10C, wood brought in from unheated storage conditions may well be below this temperature and should be allowed to warm to above 10C before attempting to bond it.

3. Some species of hardwood can be particularly dense resulting in difficulties in the adhesive penetrating the surface. In such instances, the surface should be removed by sanding to open the pores of the timber and double spreading may prove necessary to ensure both surfaces have sufficiently "wetted" out.

4. Some timbers, and particularly maple can be over prepared by planeing the timber; this leaves a "glassy" surface, which is detrimental to the bonding process.

5. Oily timbers, such as teak, present problems with the "oils" inhibiting a satisfactory bond.

Degreasing is normally required; this can be achieved by wiping the surface with methylated spirit. Joints must be treated in the same manner.

The faying area should be abraded as close to bonding as practically possible.

Sanding can also remove surface grease, but if the adhesive is not applied shortly afterwards there are likely to be problems of case hardening where the oils have surfaced again.

As important as preparation, is working in the correct temperature and that means, within reason, as warm as possible, 20C is ideal. At higher temperatures the glue becomes much less viscous, easier to apply and penetrates the timber instead of laying on the surface, a better glue line results.

Use good quality glue brushes. Surfaces once glued should not be exposed to the air for any length of time. Do not over cramp; it's possible to starve a joint this way.

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Timber bought as kiln dried and stored under cover will present no problem.

HARDWOOD

Perhaps as important as the glue is the preparation the joining surfaces, especially for Oak and oily timbers, Teak, Iroko etc.

Timber direct from machining has a slightly glazed surface and the surface fibres are compressed by rollers etc, this is far from ideal and it is essential that the surfaces to be joined should be ridged of this unwanted smoothness.

Use a scouring plane (blade with fine points), hacksaw blade, or very coarse sandpaper. Plywood must be, treated in the same manner. Dust with a bristle brush, oily timbers should be degreased with methylated spirit. The faying area should be abraded as close to bonding as practically possible. A minimum of five minutes closed assembly time should be allowed before the application of pressure.

Bring the surfaces firmly into contact.

This will enable the glue to penetrate the surface fibres of the timber and avoid excessive squeeze out.

STORAGE

Store Cascamite in a cool dry place with the container and bags tightly closed. Protect from heat. When stored at higher temperature, the stability will impair considerably.

Care should be taken that powder does not absorb moisture and water. The bags, which have been opened, should be carefully closed before storage.

When stored in original bags, store below 25C .

Best used within one year of manufacture. If stored for longer make a test joint first.

Do not allow to reach 30C. Cascamite exposed to heat will deteriorate rapidly and require a lot more water to activate, this will result in weak non sticky resin and bond failure.

Urea Formaldehyde resin (Cascamite) is a hygroscopic material.

Because of their affinity for atmospheric moisture, hygroscopic materials require storage in sealed containers. (Plaster and cement are hygroscopic).

Once the container is opened care should be taken to ensure that the contents has minimum contact with the air. Powder should be removed quickly and the container resealed before continuing with bonding.

If these materials are stored in damp conditions, the container/Bag is left open or if the containers are subject to large temperature variations the powder will partially react and although the product looks the same it will not work as an adhesive.

Semi activated adhesive will not mix properly and will separate out when mixing is attempted.

Heat and moisture will cause the glue powder to become solid or insoluble. Claims for loss due to neglect of this warning cannot be accepted.

CLEANING OF CONTAINERS AND TOOLS

Wash down equipment with clean cold water before the glue sets. After the glue has set it becomes hard and difficult to remove. In particular, glue should not be allowed to harden on brushes or rollers.

WARNING: The fully cured adhesive can only be removed by mechanical means (sawing, sanding etc).

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HEALTH & SAFETY

Synthetic glues may cause dermatitis in some people. As a precaution, any glue spilt on the hands should be removed immediately with soap and water before it sets. Avoid the formation or spread of dust in the air. Wear suitable protective clothing, gloves and eye/face protection. Ensure good ventilation. Keep out of reach of children. Contact with eyes - wash immediately with warm water. Remove excess from tools and mixing vessels before washing in warm soapy water. Do not empty into drains or watercourses.

The information supplied herein is accurate to the best of our knowledge. Since conditions and methods are beyond our control, no warranty is expressed or implied. You are advised to assess the suitability of the product on a test area before application.

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