



Trade Grade Products Ltd.

ADHESIVES * SEALANTS * TAPES

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Trademite One Shot

Powdered Urea Formaldehyde Resin Adhesive

General Description

Trademite One Shot is a powdered urea formaldehyde resin glue designed for use in the temperate climates of the UK and Northern Europe, and is suitable for general joinery, cabinet work and shop fitting. It is used by simply mixing with water; the correct amount of hardener is already blended in to the powder. The reconstituted mixture is a gap filling, moisture resistant adhesive capable of forming joints which satisfy the requirements of BS EN 204, Durability class D3 and BS EN 302-1 A3 type II adhesive. The glue line is mould resistant and does not stain most varieties of timber. Trademite One Shot is supplied in 25Kg polypropylene sack or in 3Kg lever-lid tins.

Application

Use 2 parts of Trademite One Shot powder to 1 part of cold water by weight. The technical information in this document is based upon this standard mixture. However, the dilution may be varied slightly to modify the viscosity, although over dilution is not recommended. Measurement by volume is also not recommended, except by calibrated equipment, as accuracy and reproducibility are difficult to achieve.

1. Put half the water in a container – avoid copper, brass and ferrous metals.
2. Add Trademite One Shot powder to the water, stirring rapidly until the powder dissolves.
3. Add the remainder of the water, stirring until smooth.
4. Trademite One Shot is now ready to use.

Physical Data

Base	Powder
Viscosity of standard mix (after 1 min @ 21°C)	70 P (Brookfield RVF, Spindle 3, 10 rpm)
Storage life @ 21°C	3 year under cool, dry conditions.
Colour	Cream

Pot Lives

As soon as the powder is mixed with water it starts to cure. The time elapsing after which the mixture is too cured to be useable is the 'Pot Life'. This is affected by the temperature (see table 1).

Temperature	10°C	15°C	20°C	25°C
Pot life	3 – 5 hours	2 – 2½ hours	40 – 60 mins	20 – 30 mins

Table 1 – Pot Life

Spreader Life

If the mixture is applied by mechanical spreader, the 'Life' in the spreader is normally some two thirds to three quarters shorter than the static pot life due to frictional heat and evaporation of water from the adhesive.

General Information

Bonding conditions

For consistent high quality bonding of wood based materials the following should always be observed:

- Mixing** Because powders are difficult to measure consistently by volume, it is strongly recommended that the ratio is measured by weight. Mixing can be done by hand for small batches or by mechanical mixer. In both cases, it is advisable to allow the mixture to stand after mixing it to attain optimum viscosity and to allow entrapped air to escape: bubbles or foam in a glue line can cause significantly weaker bonds.
- Substrates** Ensure that the surfaces to be bonded are clean and free of dust and grease. Very oily timber should be wiped with a cloth soaked in detergent or if necessary a degreasing solvent (read the safety instructions carefully). The surfaces of timber should be planed or sanded not more than 48 hours before bonding. Any sign of case hardening (i.e. a smooth shiny surface) must be removed.
- Moisture content** Ideally the moisture content of the substrate should be 10 – 14% 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 fractures.
- Application** The adhesive mix can be applied by brush, roller, hand applicator or mechanical rollers at a spread rate of 100 – 250 g/m³. Mechanical spreaders are more capable of achieving the lower end of this range. Application to both surfaces is recommended for hardwood and particularly dense timber.
- Temperature** At temperature below 15°C, the mixture is very thick and the cure rate of urea formaldehyde resins is extremely slow. Below 10°C the reaction virtually stops for all practical purposes, although the viscosity increases to a thick paste within 24 hours. This will cure to normal glass hard form if the temperature is raised, but this procedure is not recommended. It is also important to note that although the workshop conditions may be above 10°C, wood brought in from unheated storage conditions may well be below this temperature and should be allowed to warm to above 10°C before attempting to bond it.

Pressing times

The following table (table 2) gives a guide based on laminating 0.6mm veneer to particle board where the heat is transferred from the press to the glue line fairly rapidly. Heat transfer through thicker substrates will vary considerably. For timber a very rough guide is 1 minutes per 5mm, but other materials may take a lot longer. This should be tested with temperature strips in a dry construction.

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.

Hours					Minutes					Seconds					
10°C	15°C	20°C	25°C	30°C	50°C	60°C	70°C	80°C	90°C	100°C	110°C	120°C	130°C	140°C	150°C
18	8	3	2	1	4½	3½	2½	2¼	2	95	80	70	65	60	-

Table 2 – Pressing times

Bonding plastic laminates

Trademite One Shot may be used to bond plastic laminates where resistance to high humidity is required, e.g. bath surrounds, sink units, vanity wall units, etc. It is essential that adequate pressure be applied as indicated above either with a press or by clamps.

Important Notice

Data contained in this document is for information only and is believed to be reliable. Trade Grade Products Ltd (TGP) cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability of the product for any specific purpose and TGP is pleased to provide a sample upon request.

Before using this product ensure that you have been supplied with and have read carefully the following information.

- ? The hazard label (complying with latest CDG/CPL regulations) applied to the container.
- ? Material Safety Data Sheet, Trademite One Shot.