Technical Data Sheet

Telephone: +44 (0)1352 757657
Telefax: +44 (0)1352 758914
Email: sales@tsresins.co.uk

Prefere 4152 with Powder Hardener Prefere 5664

Liquid urea adhesive for veneering

Use

Prefere 4152, mixed with hardener Prefere 5664 provides a suitable adhesive for veneering, door construction and other wood assembly applications. The hardener combines fillers which extend the glue mix and prevent penetration of the adhesive through the veneer. It provides low viscosity mixes with a long spreader life.

Technical data

	Prefere 4152
Appearance	Semi-opaque liquid
Viscosity at 25°C (mPas)	1000 - 2200
SG at 25°C (g/cm^3)	1.28 – 1.31
pH	7.0 - 9.0
Solids Content (%)	64 - 68

Hardener Prefere 5664 is a white free flowing powder.

Prefere 4152 with Hardener Prefere 5664 complies with BS 1203: Type MR and BS EN 12765: Class C3 (when hot cured).

Instructions For Use

Mixture

Resin and hardener are mixed together in the following ratio:

	Parts by weight
Prefere 4152	100
Prefere 5664	30 -50
Water	0 -10

Mix resin and hardener together and stir until a smooth mix is obtained.

Pot life

See Table 1

Preparation of Materials for Bonding

Surface Preparation

Ensure that the surfaces to be bonded are smooth, clean and free from dust or other deposits. Plywood veneers, lippings *etc.* should be of uniform thickness. To avoid wetting difficulties that may arise through case-hardening it is good practice to sand plywood before gluing even though it may appear to have been sanded at manufacture.

Moisture Content

For best results with TS Resins adhesives, the moisture content of the surfaces to be bonded should be within the range 7-13%, but when pressing at temperatures above 105°C moisture content should not exceed 10%. Variation between the adjacent surfaces should not be greater than 3% moisture content.

Application

Application is usually by mechanical spreader, with the actual spread depending on the mix and surfaces to be bonded.

Spread Rates

It is generally adequate to apply the mixture to one of the surfaces only. Using a mechanical spreader, spreads of 80 – 150 grams per square metre are obtainable.

Hot Pressing

The times given in Table 2 are the total pressing time for bonding a 0.6mm wood veneer to particleboard, at the platen temperature given in the table. Reference should also be made to “heat penetration” (below) for calculation of pressing times using other materials.

Heat Penetration

For assemblies where the distance to the farthest glue line exceeds 0.6mm, allowance must be made for the heat to travel from the press platen. Heat penetration time will vary according to the density of the wood, moisture content and distance to the farthest glue line. Table 3 is a guide to the additional time required for low and medium density timbers.

The pressing times apply when bonding absorbent materials such as low and medium density wood. The pressing time must be considerably extended when bonding less absorbent or high density materials.

Quantities Available

Prefere 4152

Prefere 4152 is available in tankers, 1000 litre IBC, 25kg poly drum and 250 kg tight head drum.

Prefere 5664

Prefere 5664 is available in 25kg polythene lined paper sacks.

Storage

Prefere 4152 and hardener Prefere 5664 should be stored firmly sealed in their original containers in a cool (5°C – 15°C), dry place. Shelf life for both products under these conditions is at least 3 months for Prefere 4152 and considerably longer for hardener Prefere 5664.

Table 1 - Pot-life

Temperature of mixture	15°C	20°C	25°C	30°C	35°C
Pot-life (hours) with Prefere 4152	22-24	12-14	5-6	2½-3	1½

Table 2 – Pressing or Clamping times

Typical pressing times in seconds for Prefere 4152

Platen Temperature								
80°C	85°C	90°C	95°C	100°C	105°C	110°C	115°C	120°C
140	120	100	75	55	45	40	30	25

Table 3 – Heat Penetration

Heat Penetration time in minutes per mm distance to the glue line

Distance to the glue line	Platen Temperature °C				
	80	90	100	110	120
0.4 – 5 mm	1.4	1.2	1.0	0.9	0.8
5 – 10 mm	1.7	1.4	1.2	1.1	1.0
More than 10 mm	2.0	1.7	1.4	1.3	1.2

High density woods and panel products such as MDF and moisture resistant particleboard may require longer pressing times due to their higher heat capacity and slower rate of water absorption. All pressing times should be used as a guide and not taken as a specification.

Caution

TS Resins adhesives and hardeners are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming into contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper – non cloth – towels should be used to dry the skin. Adequate ventilation of the working area is recommended. These precautions are described in greater detail in Material Safety Data sheets for the individual product. These are available on request and should be referred to for fuller information.

The suggestions given in these notes are based on data gained from experience and tests. However, since operating conditions in the user's plant is beyond our control, we cannot assume responsibility for any risks or liabilities, which may result from the use of our products.

. PdW 12.2014