



## PU Adhesive

**Code 722**

### DESCRIPTION

PU Adhesive is a moisture curing single part, Polyurethane adhesive specifically designed for applications in the panel manufacturing and laminating industries where it is required to bond many types of plastic foams and other insulating materials to a wide variety of both rigid and flexible facing materials. Such composites form structural sandwich panels and insulated building boards and may be used in the manufacture of cold stores, caravans, mobile homes and offices, insulated building units etc.

### SURFACE PREPARATION

Materials to be bonded should be clean and free from dust, grease and other contaminants. Metals should be stored in a warm environment prior to bonding to avoid chilling of the glue line, which leads to extended cure times. Most pre-finished metals have backing coats which are well suited to bonding. Some grades of Aluminium, Galvanised Steel and plastics however can be difficult to bond and may require the use of a primer. A test panel should always be prepared when new materials are to be used to establish the adhesives compatibility.

### ADHESIVE APPLICATION

The adhesive is applied by trowel, notched scraper, hand roller coater or an automatic bead applicator to one surface only of each glue line. The amount required will vary according to the porosity/smoothness of the substrates and the means of application, but will normally be in the range 80 - 140 grams per square metre. Once the adhesive has been applied it should be over-misted with water, (approximately 5 - 15% of water based on the adhesive coating weight is the optimum amount - excessive amounts of water should be avoided). The panel is then assembled as soon as possible to minimise water evaporation and placed under pressure within the open time of the adhesive.

SOLIDS	100%
VISCOSITY	4000 + 500 cps @ 25°C
COLOUR	Brown
TACK LIFE	N/A
COVERAGE	Up to 12.5m <sup>2</sup> per kg
CLEANER	Solvent 6 or 9
FLASH POINT	Above 150°C
SHELF LIFE	3 months
PRODUCT	PU Adhesive

### STORAGE AND HANDLING

PU Adhesive is a moisture sensitive adhesive and left in contact with the open atmosphere will eventually gel. For this reason PU Adhesive is protected with a blanket of Nitrogen in the drum prior to despatch, which forms a dry, inert layer on top of the adhesive. The adhesive under these conditions will have a storage life in excess of three months, provided the containers are stored unopened in a dry place at a temperature between 4oC and 25oC. Once the container has been opened for use and the inert blanket replaced by moist air, the adhesive will have a limited life. To eliminate the moist air reacting with the adhesive a Nitrogen cylinder can be connected to the small bung hole of the drum, via suitable pressure reducing valves to give a positive pressure of 1 - 2 psi.

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# TECHNICAL DATA



Alternatively a desiccator can be connected to the small bung hole of the drum, which will dry the incoming air, replacing the adhesive used. A suitable desiccator with the relevant pipework can be supplied by Biokil Crown. This will last for approximately 3 months prior to regeneration. Further information is available upon request.

If water enters the drum of adhesive, it will react giving off carbon dioxide which can cause over pressurisation of closed cans and drums.

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

1. The hazard labels (complying with CHIP 3 Regs 2002 and CDG/CPL Regs).
2. Biokil Crown Material Safety Data Sheet PU Adhesive

The pressure required will depend to a great extent on the nature of the substrates but is usually in the range 0.5 to 0.9 bar.

Pressure should be maintained until the adhesive is sufficiently cured to permit handling of the bonded item. Full cure of the adhesive is not obtained for 24 hours and handling within this period should be kept to a minimum.

The open time and cure cycle to permit handling will vary according to:-

1. Temperature
2. Weight of adhesive applied
3. Weight of water over mist
4. Method of working
5. Substrates being bonded

and should always be determined by experiment.

## Processing Guide

Weight of adhesive 80 -140 g/m<sup>2</sup> Water overmist 4 - 10.5 g/m<sup>2</sup>

Temperature °C	15	17.5	20	22.5	25
* Open time mins	16	14	11	9	7
* Cure time mins	40	35	30	25	20

\* measured from when the water overmist is applied.

## **CLEAN DOWN**

PU Adhesive when uncured can be removed with cleaning Solvent 6 or Solvent 9.

Cured product will prove very difficult to remove, however, soaking in Solvent 6 overnight will soften the adhesive.

Nozzles from automatic bead applicators should be immersed in a non-reactive plasticiser when not in use.