



DATA SHEET

Polyurethane Resin: PU 200 Summer Version

PU200 has been developed as a cold pour system to encapsulate piezo sensors and to stick surface mounted sensors.

The material is available in 4kg kits.

METHOD OF USE

The resin is a filled system and therefore some degree of sedimentation may occur, particularly if the resin has been left standing over long periods of time or stored at elevated temperatures (in excess of 25°C). This can be readily dispersed by mixing with an electric drill and suitable attachment or a broad bladed spatula.

The resin and hardener are mixed in the ratio:

7.22 : 1 By weight

7.53 : 1 By volume

Colour of mixed system	Black
Density of resin	1.86
Density of hardener	1.23
Density of mixed system	1.74
Viscosity of resin	15,000 cp at 20 - 25°C
Viscosity of hardener	4 Poise at 20 - 25°C
Viscosity of mixed system	13,000 cp at 20 - 25°C
Pot life	8 - 15 minutes at 15 - 25°C (150g mass)
Set time	10 - 15 minutes at 15 - 25°C (150g mass)
Full Cure time	2 days
Peak Exotherm	60°C (150g mass)
Shore D Hardness after 24hrs at room temp.	A: 75 B: 70 after 5 seconds

Gel time is very much dependent upon ambient temperature, mixing time and road temperature

It should be noted that road slots are natural heat sinks and cure times may be extended by the prevention of exothermic heat developing.

WATER ABSORPTION: After 5 Days at 40°C = 2.5% (Test Piece 50mm diameter x 6mm thick)

TENSILE STRENGTH RESULTS (REF: ISO R527)

PU200:

Surface Area of Test Piece: 10mm x 4.5mm = 45mm²

Result MPa: 8.4

Elongation: 12%

COMPRESSIVE STRENGTH AT YIELD POINT (REF: ISO 844 - 1978)

PU200:

Surface Area: 3.14 x 10³ = 314mm²

Result MPa: 35.7

Test Piece Lengths: 50mm

Compression at Yield Point 14mm

Cleaning Equipment

All equipment should be cleaned before the compound has hardened.

Storage

The resin and hardener should be stored separately in tightly sealed containers until required for use. The shelf life on this material is 12 months unless otherwise stated on the label.

Preferred storage temperature is around 20°C but must not be allowed to reach freezing or exceed temperatures of 30°C.

CAUTION

Polyurethane systems 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. The use of barrier creams or impervious gloves is advised. The skin should be thoroughly cleansed at the end of each working period, either by washing with soap and warm water or by using a resin removing cream - use of solvents is to be avoided. Disposable paper towels - not cloth towels should be used to dry the skin. Adequate ventilation of the working area is recommended.

Polyurethane hardeners are moisture sensitive. Containers of both resin and hardener should be kept tightly closed when not in use to prevent ingress of atmospheric moisture.

The information given is derived from test and/or extrapolations believed to be reliable. However, the product is offered for evaluation on the understanding that the customer will satisfy himself that the product is suitable for his intended use.

Advice on specific applications will be given on request.

In order that potential users may satisfy themselves by experiment that the material meets their requirements, free of charge samples are readily available.

None of the data and/or recommendations contained herein are to be assumed as an inducement to infringe any patent.

The Company's liability is limited to the replacement of materials shown to be defective as delivered, or to a cash refund. We accept no liability for loss or damage brought about by the use of unsuitable or defective material, or by subjecting viable material to inappropriate conditions.

NOTE:-

Before handling any material supplied, users should familiarize themselves with the Health & Safety information provided by the company, both in written correspondence and the information sources listed hereunder.

- a) The product applications / performance details.
- b) The labels on the product packages and containers.
- c) The product Health & Safety Data Sheets.

These results do not constitute a specification and are quoted for guidance use only.