

RESIN	HARDENER	MIXING RATIO
PU 097 Component A	PUH 1097 Component B	100:25

**INTRODUCTION:** Two component filled polyurethane system. High fluidity and low specific gravity. Very good details reproduction. Easily machined and polished.

**APPLICATION:** Foundry patterns, moulds, moulds filling.

**PROCESSING:** Face or mass casting. The products have to be cast on dry and well insulated against moisture. Before any use the part A (polyol) must be homogenized. The both parts (polyol and isocyanate) must be mixed at room temperature above 20 °C according to the ratio indicated on the technical data sheet. Curing at room temperature.

**ISTRUCTIONS:** Prepare surface of moulds with 2 or 3 applications of wax release agents. Homogenize the resin component before use. Mix the two components (resin and hardener) in the proper mixing ratio avoiding air trapping until an homogeneous mixture is obtained, then apply.

**POST-CURING:** Post curing is always advisable for curing systems in order to stabilize the cured handwork and to reach the best mechanical properties. Post curing becomes necessary when the handwork works at elevated temperature. Post cure the handwork as stated in the table, avoiding thermal gradients over 10° C/hour. The thermal gradient and post curing time refer to standard specimens. Users should find the best conditions depending on the component size and shape (for big size components decrease the thermal gradient and increase the post curing time).

**STORAGE AND HANDLING PRECAUTIONS:** Polyurethane components can be stored for six months in the original well sealed package, in a cool and dry place. The hardener may present an increase in viscosità but does not change the cured system properties. The two components are moisture sensitive (keep the package tightly sealed!). Moisture absorption make cause the expansion of the product during application, and /or the hardener may crystallize during storage. The isocyanates may crystallize at low temperatures. To restore the original conditions, heat the material at 70\_80°C avoiding local overheating. Before use, the product must be rehomogenized and cooled down at room temperature. Refer to the product health and safety data sheet.

**SYSTEM SPECIFICATIONS:**

RESIN:	Viscosity at 25°C	MPa	6000 - 9000
HARDENER:	Viscosity at 25°C	MPa	200 - 250

**TYPICAL SYSTEM CHARACTERISTICS**

Resin Colour	White
Hardener Colour	Pale Yellow
Density resin at 25°C (ASTM D 1475)	1,60 - 1,65 (g/ml)
Density hardener at WC (ASTM 0 1475)	1,18 - 1,22 (g/ml)
<b>PROCESSING DATA</b>	<b>A + B</b>
Mixing ratio by weight	100 g.
Mixing ratio by volume	35 ml.
Pot life (200 ml, 40 mm, 25°C)	3 - 5 Min.
Exothermic peak (200 ml, 40 mm, 25°C)	50 - 60 °C
Gelation time (15 ml, 6 mm, 25°C)	8 - 10 min.
Post-curing 60°C	4 - 5 h
Maximum recommended thickness	35 - 55 mm

**CURED SYSTEM PROPERTIES**

Properties determined on standard specimens cured 24 h at R.T. (23±2° C) + 15 h at 60° C

<b>DATI DI LAVORAZIONE</b>	<b>A + B</b>
Colour	White
Machinability	Very good
Density (ASTM D 792)	1.30 - 1.35 g/ml
Shore hardness (ASTM D 2240)	78 - 80 D/15
Glass transitino (ASTM D 3418)	80 - 82 °C
Max. recommended operating temperature	70 °C
Flexural strength (ASTM D 790)	40 - 45 MN/m <sup>2</sup>
Flexural elastic modulus (ASTM D 790)	3.500 - 3.600 MN/m <sup>2</sup>
Tensile strength (ASTM D 638)	35 - 40 MN/m <sup>2</sup>
Elongation at break (ASTM D 638)	1,2 - 1,6 %
Compressive strength (ASTM 0 695)	47 - 52 MN/m <sup>2</sup>

nd = not determined; na = not applicable; RT = TA = laboratory room temperature (23±2°C)

Conversion units: 1 mPas = 1 cPs 1MN/m<sup>2</sup> = 10 kg/cm<sup>2</sup> = 1 MPa

(\*) for larger quantities pot life is shorter and exothermic peak increases

(\*\*) the brackets mean optionality

(\*\*\*) The maximum operating temperature is given on the basis of laboratory information available being it function of the curing conditions used and of the type of coupled materials. For further possible information see post-curing paragraph.

The information given in this publication is based on the present state of our technical knowledge but buyers and users should make their own assessments of our products under their own application conditions.