

APPLICATIONS

Casting for production of transparent prototype parts and mock-ups having mechanical properties close to those of thermoplastics such as polypropylene or PEHD.

PROPERTIES

- Very good impact resistance
- Quick hardening
- Thermoplastic aspect
- Easy processing

PHYSICAL PROPERTIES				
Composition		ISOCYANATE PX 205	POLYOL PX 205	MIXING
Mixing ratio by weight		100	50	
Aspect		liquid	liquid	liquid
Colour		white	amber to dark amber	beige to dark beige
Brookfield LVT viscosity at 25 °C (mPa.s)	-	3.000	150	1.600
Density of parts before mixing	ISO 1675-85	1,08	1,08	-
Density of the cured product	ISO 2781-88	-	-	1,08
Pot life at 25 °C on 150 g (min)	Gel Timer TECAM			12 -15

PROCESSING CONDITIONS

By crystallization of isocyanate (non homogeneous product) it should be placed in an oven at 60 °C until the product becomes homogeneous ; homogenize again. Isocyanate must be at room temperature before using.

- Use in a vacuum casting machine.
- Heat the mould at 70 °C.
- Heat both parts at 20 °C in case of storage at a lower temperature.
- Weigh isocyanate in the upper cup (do not forget to allow for residual cup waste).
- Weigh polyol in the lower cup (mixing cup).
- After degassing for 10 minutes under vacuum pour isocyanate in polyol and mix for **2 minutes**.
- Cast in the silicone mould, previously heated at 70 °C.
- Put in an oven at 70 °C minimum.
- Demould after 1 hour.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

- Ensure good ventilation
- Wear gloves, safety glasses.

For further information, please consult the product safety data sheet.

**VACUUM CASTING POLYURETHANE
FOR PROTOTYPES
FLEXURAL MODULUS 500 MPa – TG 100 °C**

MECHANICAL PROPERTIES AT 23 °C

Hardness	ISO 868-85	Shore D1	70
Flexural modulus of elasticity	ISO 178-93	MPa	500
Flexural strength	ISO 178-93	MPa	30
Tensile modulus of elasticity	ISO 527-96	MPa	530
Tensile strength	ISO 527-96	MPa	25
Elongation at break in tension	ISO 527-96	%	100
Charpy impact strength	ISO 179/2D-94	kJ/m ²	-

THERMAL AND SPECIFIC PROPERTIES (1)

Glass transition temperature (Tg)	TMA METTLER	°C	90 – 100
Heat deflection temperature (HDT)	ISO 75 Ae-93	°C	55
Maximal casting thickness		mm	5
Linear shrinkage (thickness 3 mm / length 250 mm)	-	% ₀₀	7
Time before demoulding at 70 °C		min.	60

(1) Average values obtained on standardized specimens/Hardening 1 hr at 70 °C + 16 hrs at 80 °C

STORAGE CONDITIONS

Shelf life of both parts is 12 months in a dry place and in their original unopened containers at a temperature between 15 and 25 °C.

Any open can must be tightly closed under dry nitrogen.

PACKAGING

*Isocyanate
6 x 1 kg*

*Polyol
6 x 0.50 kg*

GUARANTEE

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