

VACUUM CASTING POLYURETHANE RESIN FOR TECHNICAL PARTS AND PROTOTYPES FLEXURAL MODULUS 1,200 MPa - T_g 100°C

APPLICATIONS

Thermoplastic-like parts (prototypes and mock-ups) with a flexural modulus of elasticity close to 1,200 MPa (example : polypropylene, HDPE).

PROPERTIES

- Low viscosity for easy casting
- Excellent impact resistance
- Exist in short pot life version
- Fast demoulding

PHYSICAL PROPERTIES				
Composition		ISOCYANATE PX 212-225	POLYOL PX 212 L	MIXING
Mixing ratio by weight at 25°C		100	100	
Aspect		liquid	liquid	liquid
Colour		light yellow	transparent	translucent
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	150	700	650
Density of parts before mixing	ISO 1675 :1975	1.22	1.03	-
Density of cured mixing	ISO 2781 :1988	-	-	1.15
Pot life at 25°C on 100g (min.)	Gel Timer TECAM			6.5

PROCESSING

- Vacuum casting into silicone molds.
- Both parts have to be processed at a temperature above +18°C.
- **Important : Shake vigorously Polyol before each weighing.**
- Degas each part before use.
- Mix for 45 seconds minimum.
- Cast in a mold pre-heated at 65 - 70°C.
- Cure for 75 minutes at 70°C before demoulding.

HANDLING PRECAUTIONS

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

- ensure good ventilation
- wear gloves and safety glasses

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

MECHANICAL PROPERTIES AT 23°C (1)			
Flexural modulus of elasticity	ISO 178 :2001	MPa	1,200
Flexural strength	ISO 178 :2001	MPa	55
Tensile strength	ISO 527 :1993	MPa	40
Elongation at break in tension	ISO 527 :1993	%	10
Charpy impact resistance	ISO 179/2D :1994	kJ/m ²	> 50
Hardness	ISO 868 :1985	Shore D1	- at 23°C
			- at 80°C
			76
			68

THERMAL AND SPECIFIC PROPERTIES (1)			
Glass transition temperature	T.M.A.-Mettler	°C	100
Heat deflection temperature	ISO 75Ae :1993	°C	75
Linear shrinkage	-	mm/m	3
Maximal casting thickness	-	mm	5
Demolding time at 70°C	-	min	75
Complete hardening time at 70°C	-	hours	4

(1) : Average values obtained on standardized specimens / Hardening 4 hours at 70°C.

STORAGE CONDITIONS

Shelf life of both parts is 6 months in a dry place and in their original unopened containers at a temperature between 20 and 30°C. Any open can must be tightly closed under dry nitrogen blanket.

Isocyanate at low temperature (< 15°C) may crystallize (evidence : non homogeneous liquid part, presence of solid parts). It is advised to heat the product at 70°C until a homogeneous liquid product is obtained.

PACKAGING

PX 212-225 ISOCYANATE
6 x 1.20 kg

PX 212 L POLYOL
2 x(6 x 0.60) kg

GUARANTEE

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