

VACUUM CASTING URETHANE FOR TECHNICAL PARTS AND PROTOTYPES FLEXURAL MODULUS 4,500 MPa - Tg 95°C

APPLICATIONS

To be used by vacuum casting in silicone molds for making prototype parts and mock-ups with mechanical properties similar to thermoplastics like polyoxymethylene and polyamide.

PROPERTIES

- High flexural modulus of elasticity
- High reproduction accuracy
- Available in two reactivity (4 and 8 min.)
- Can be easily colored with CP pigments
- Fast demolding

PHYSICAL PROPERTIES				
		PART A PX 245	PART B PX 245 – 245/L	MIXING
Composition		ISOCYANATE	POLYOL	
Mixing ratio by weight		100	40	
Aspect		liquid	liquid	liquid
Color		grey	colorless	off-white
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	800	1,000	2,200 (2)
Specific gravity at 25°C	ISO 1675 :1975	1.34	1.10	-
Specific gravity at 23°C	ISO 2781 :1988	-	-	1.22
Pot life at 25°C on 140g (min.)	PX 245 PX 245/L			4 8

(2) : Mixing is not instantly miscible.

VACUUM CASTING PROCESSING CONDITIONS

- Heat both parts (isocyanate and polyol) at 23°C in case of storage at low temperature.
- **Important : Shake vigorously part A before each weighing.**
- Weigh the both parts.
- After degasing for 10 minutes under vacuum mix for
 - 1 minute with PX 245
 - 2 minutes with PX 245/L
- Cast under vacuum in a silicone mold, previously heated at 70°C.
- Demold after 30 minutes minimum at 70°C (allow the part to cool down before demolding).

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.

VACUUM CASTING URETHANE FOR TECHNICAL PARTS AND PROTOTYPES FLEXURAL MODULUS 4,500 MPa - Tg 95°C

MECHANICAL PROPERTIES (1)			
Flexural modulus of elasticity	ISO 178 :2001	MPa	4,500
Flexural strength	ISO 178 :2001	MPa	150
Tensile strength	ISO 527 :1993	MPa	85
Elongation at break in tension	ISO 527 :1993	%	3
Charpy impact strength	ISO 179 1EU :1993	kJ/m ²	30
Hardness	- at 23°C	Shore D1	85
	- at 80°C		80

THERMAL AND SPECIFIC PROPERTIES			
Glass transition temperature (1)	TMA METTLER	°C	95
Heat deflection temperature (1)	ISO 75Ae :1993	°C	92
Linear shrinkage (1)		mm/m	2
Maximal casting thickness		mm	5
Demolding time at 70°C	PX 245 PX 245/L	min.	45
			60

(1) Average values obtained on standardized specimens/Hardening 12 hr at 80°C

STORAGE

Shelf life is 6 months in a dry place and in original unopened containers at a temperature between 15 and 25° C. Any open can must be tightly closed under dry nitrogen.

PACKAGING

Isocyanate (PART A)
2 x (6 x 0.625 kg)

Polyol (PART B)
6 x 0.500 kg

GUARANTEE

The information of our technical data sheet are based on our present knowledge and the result of tests conducted under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON refuse any guarantee about the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The guarantee conditions are regulated by our general sale conditions.