

CASTING URETHANE RESIN UNDER VACUUM FOR TECHNICAL PARTS AND PROTOTYPES FLEXURAL MODULUS 1,500 MPa - T_g 75 °C

APPLICATIONS

Used by casting in silicone moulds for the realisation of prototype parts and mock-ups whose mechanical properties are close to those of thermoplastics.

PROPERTIES

- Processing under vacuum recommended
- High reproduction accuracy
- This product can be easily pigmented with colouring CP
- Low aggressive against silicone toolings

PHYSICAL PROPERTIES				
Composition		ISOCYANATE PX 1000-215	POLYOL PX 215	MIXING
Mixing ratio by weight		100	100	
Mixing ratio by volume at 25 °C		88	100	
Aspect		liquid	liquid	liquid
Color		straw yellow	light to dark amber	off-white
Viscosity at 25 °C (mPa.s)	BROOKFIELD LVT	60	175	100
Specific gravity at 25 °C	ISO 1675 :1975	1.15	1.02	-
Specific gravity at 23 °C	ISO 2781 :1988	-	-	1.06
Pot life at 25 °C on 200g (min.)	Gel Timer TECAM			3 - 4

VACUUM CASTING PROCESSING CONDITIONS

- Warm the products at 23 °C by storing at a lower temperature.
- Weigh both parts.
- Mix for 1 minute minimum after degasing for 10 minutes under vacuum.
- Cast under vacuum in a silicone mold pre-heated at 70 °C.
- Demold after 2 hours at 70 °C (let cool before demolding).

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.

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MECHANICAL PROPERTIES AT 23 °C AFTER HARDENING ⁽¹⁾

Flexural modulus of elasticity	ISO 178 :2001	Mpa	1,500
Maximal flexural strength	ISO 178 :2001	Mpa	55
Maximal tensile strength	ISO 527 :1993	Mpa	40
Elongation at break	ISO 527 :1993	%	20
CHARPY impact strength	ISO 179/2D :1994	kJ/m ²	25
Hardness - at 23 °C - at 80 °C	ISO 868 : 1985	Shore D1	74 65

THERMAL & SPECIFIQUES PROPERTIES ⁽¹⁾

Glas temperature transition (1)	TMA METTLER	°C	75
Linear shrinkage (1)	-	mm/m	2
Maximal casting thickness	-	mm	5
Demoulding time @ 70 °C	-	min.	120
Complete hardening time @ 23 °C	-	d	4

(1) Average values obtained on standardized specimens/Hardening 12 hrs at 70 °C

STORAGE

Shelf life is 6 months for Isocyanate and 12 months for Polyol 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 blanket.

PACKAGING

Isocyanate

Polyol

1 x 5 kg

1 x 5 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.