



PX 521/HT PART A PX 522/HT PART B

VACUUM CASTING URETHANE
 FOR TRANSPARENT PROTOTYPES
 FLEXURAL MODULUS 2,100 MPa - HDT 100 °C

APPLICATIONS

Used by casting in silicone moulds for making transparent prototype parts until 10 mm thickness : headlights, glazier, any parts which have the same properties as PMMA, cristal PS, MABS...

PROPERTIES

- High transparency
- Easy polishing
- High reproduction accuracy
- Good UV resistance
- Easy processing
- Fast demoulding

PHYSICAL PROPERTIES				
Composition		ISOCYANATE PX 521HT A	POLYOL PX 522HT B	MIXING
Mixing ratio by weight		100	55	
Aspect		liquid	liquid	liquid
Colour		transparent	bluish	transparent*
Viscosity at 25°C (mPa.s)	Brookfield LVT	200	1,100	500
Density of parts before mixing	ISO 1675: 1985	1.07	1.05	-
Density of the cured product	ISO 2781: 1996	-	-	1.06
Pot life at 25°C on 155g (min)	-			5 - 7

*PX 522 is available in orange (PX 522HT OE Part B) and in red (PX 522HT RD Part B)

VACUUM CASTING PROCESSING CONDITIONS

- Use in a vacuum casting machine.
- Heat the mould at 70 °C (preferably polyaddition silicon mould).
- Heat both parts at 20 °C in case of storage at a lower temperature.
- Weigh part A in the upper cup (do not forget to allow for residual cup waste).
- Weigh part B in the lower cup (mixing cup).
- After degassing for 10 minutes under vacuum pour part A in part B and mix for **1 minute 30 to 2 minutes**.
- Cast in the silicone mould, previously heated at 70 °C.
- Put in an oven at 70 °C minimum.
- Demould after 45 minutes at 70 °C.
- Carry out the following thermal treatment : 3 hr at 70 °C + 2 hr at 80 °C and 2hr at 100 °C.
- Always while curing, place the part on stand.

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.



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MECHANICAL PROPERTIES AT 23°C AFTER HARDENING (1)			
Flexural modulus	ISO 178 : 2001	MPa	2.100
Flexural strength	ISO 178 : 2001	MPa	105
Tensile modulus	ISO 527 : 1993	MPa	2.700
Tensile strength	ISO 527 : 1993	MPa	75
Elongation at break in tension	ISO 527: 1993	%	9
Charpy impact strength	ISO 179/1 eU : 1994	kJ/m ²	27
Final hardness	ISO 868 : 2003	Shore D1	87

THERMAL AND SPECIFICS PROPERTIES (1)			
Glass temperature transition (T _g)	ISO 11359 : 2002	°C	110
Heat deflection temperature (HDT 1.8 MPa)	ISO 75 Ae :1993	°C	100
Maximal casting thickness		mm	10
Demoulding time at 70 °C (thickness 3 mm)		min.	45

(1) Average values obtained on standard specimens/Hardening 4 hrs at 80 °C + 16 hrs at 100 °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 (Part A) 6 x 1.0 kg	Polyol (Part B) 6 x 0.55 kg
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GUARANTEE

The information contained in this technical data sheet result from research and tests conducted in our Laboratories 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 guarantee the conformity of their products with their specifications but cannot guarantee 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 responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications.