# PX 280

## POLYURETHANE CASTING FOR TECHNICAL AND PROTOTYPES PARTS

*FLEXURAL MODULUS 2.800 MPa – Tg 80 °C*

## DESCRIPTION

*Used by vacuum casting or low pressure injection process in silicone or rigid moulds for the realisation of prototype parts and mock-ups whose mechanical properties are close to thermoplastics like filled polypropylene or filled ABS.*
*Could be used for parts in contact with aqueous, acid and greasy foods (like fish and meat). None homologated for liquid contact.*

## PROPERTIES

- *Compliance with directive 2002/72/CE*
- *Compliance with directive 2007/19/CE regarding food contact*
- *Compliance with FDA 21 CFR 177.2600 regulation for repeated use*
- *Good thermal resistance*
- *Good impact and flexural resistance*

| PHYSICAL PROPERTIES | | | | |
|---|---|---|---|---|
| Composition | | **ISOCYANATE** | **POLYOL** | **MIXED** |
| Mixing ratio by weight | | 100 | 80 | |
| Aspect | | liquid | liquid | liquid |
| Color | | amber | white | off white |
| Viscosity at 25 °C (mPa.s) | BROOKFIELD LVT | 450 | 500 | - |
| Density of parts before mixing at 25 °C<br>Density of cured mixing at 23 °C | ISO 1675 : 1985<br>ISO 2781 : 1996 | 1,22<br>- | 1,08<br>- | -<br>1,19 |
| Pot life at 25 °C on 100 g (min) | Gel Timer TECAM | | | 20 |

| MECHANICAL PROPERTIES AT 23 °C (1) | | | |
|---|---|---|---|
| Flexural modulus of elasticity | ISO 178 : 2001 | MPa | 2.800 |
| Flexural strength | | MPa | 117 |
| Tensile strength | ISO 527-2 : 1993 | MPa | 75 |
| Elongation at break | | % | 5 |
| Charpy impact strength | ISO 179/1D : 1994 | $kJ/m^2$ | 25 |
| Hardness | ISO 868 : 2003 | Shore D1 | 85 |

| THERMAL AND SPECIFIC PROPERTIES (1) | | | |
|---|---|---|---|
| Glass transition temperature | ISO 11359 : 2002 | °C | 80 |
| Maximal casting thickness | - | mm | 10 |
| Demolding time at 50 °C | - | h | 2/3 |
| Limit of temperature for FDA & CE compliance | - | °C | 50 |

*(1) Average values obtained on standardized specimens/Hardening 16 hours at 70 °C.*



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## MANUAL PROCESSING CONDITIONS

- *Warm the products at 23°C if stored at a lower temperature.*
- *Shake carefully the polyol**
- *Weigt both parts.*
- *Mix for 1 minute minimum.*
- *After degassing for 5 minutes, cast in a silicone mould pre-heated at 50°C.*
- *Demold after 2 – 3 hours at 50°C (let cool before demolding).*
- *Post cure to get the final mechanical properties (4 hours at 80°C).*

## 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.*

## STORAGE CONDITIONS

*Shelf life of both parts is 9 months in a dry place and in original unopened containers at a temperature between 15 and 25°C. Any open must be tightly closed under dry nitrogen blanket.*

**In case of long storage, polyol component shows a white layer at bottom of its canister. Do not intend to remix that hard layer when shaking the polyol pack before use with iso.*
*The occurrence of that hard layer does not modify final properties of the resin if not mixed with the liquid part.*

## 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.*



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