

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 with very good thermal resistance such as : PA6.6, PPS, PEEK.

PROPERTIES

- Good thermal resistance
- Low viscosity
- Fast demoulding
- Good impact resistance
- Colourable

PHYSICAL PROPERTIES				
		PART A	PART B	MIXING
Composition		ISOCYANATE	POLYOL	
Mixing ratio by weight		100	50	
Aspect		liquid	liquid	liquid
Colour		transparent	transparent to light amber	light amber
Viscosity at 25 °C (mPa.s)	BROOKFIELD LVT	300	200	250
Specific gravity at 25 °C	ISO 1675 :1985	1.19	1.01	-
Specific gravity at 23 °C	ISO 2781 :1996	-	-	1.19
Pot life at 23 °C on 150 g (min.)	-			5

PROCESSING (Vacuum casting machine)

Important : When storing the product at a temperature under 15 °C the part A (isocyanate) can crystallise. It is recommended to cure the product 2h at 70 °C until complete decrystallisation then return to room temperature.

- Both parts have to be processed at a temperature above +18 °C and below 25 °C.
(Before use, do not preheat the two separated parts higher than room temperature)
- Place the ISO part in the upper bowl of the machine.
- Mix 1 minute approx.
- Cast in a pre-heated polyaddition silicone mould (ESSIL 291) at 70 °C .
- Allow to cure 60 minutes at 70 °C.
- Demoulding is possible under heat.
- Carry out the following thermal treatment : 60 min at 100 °C + 120 min at 130 °C and 60 min at 160 °C.
- Always while curing, place the part on stand.

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 AFTER HARDENING ⁽¹⁾

Final hardness	ISO 868 : 2003	Shore D/1	80
Hardness at 130 °C	ISO 868 : 2003	Shore D/1	70
Hardness at 150 °C	ISO 868 : 2003	Shore D/1	65
Tensile modulus	ISO 527 : 1993	MPa	1.800
Tensile strength	ISO 527 : 1993	MPa	61
Flexural modulus	ISO 178 : 2001	MPa	1.850
Flexural strength	ISO 178 : 2001	MPa	80
Elongation at break	ISO 37 : 1994	%	13
Impact strength (CHARPY) <i>Unnotched specimens</i>	ISO 179/1eU: 1994	kJ/m ²	41

THERMAL AND SPECIFIC PROPERTIES ⁽¹⁾

Glass temperature transition (1)	ISO 11359 : 2002	°C	220
Coefficient of linear thermal expansion (C _L TE) (+20 to +130 °C)	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹	120
Linear shrinkage in aluminium mould (1)	during demoulding	mm/m	4
Linear shrinkage in aluminium mould (1)	5 hr at 130 °C	mm/m	8
Linear shrinkage in silicone mould (1)	during demoulding	mm/m	0.5
Linear shrinkage in silicone mould (1)	72 hr at 130 °C	mm/m	4.5
Maximal casting thickness		mm	5
Demoulding time at 70 °C		hr	1

(1) Average values obtained on standard specimens/Hardening 1 hr at 70 °C + 72 hr at 130 °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 blanket.

PACKAGING

Unit with

Part A : 6 x 1.0 kg

Part B : 3 x 1.0 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.