

DESCRIPTION

Polyurethane surface casting resin designed for foundry tools (patterns, core boxes) on aluminium pre-forms, concrete resin etc.

PROPERTIES

- Good abrasion resistance
- Good shock resistance
- Quick hardening
- Low toxicity

PHYSICAL PROPERTIES				
Composition		ISOCYANATE	POLYOL	MIXED
Mix ratio by weight		100	50	
Mix ratio by volume at 25°C		100	50	
Aspect		liquid	liquid	liquid
Colour		white	amber to dark amber*	beige to dark beige*
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	3,000	150	1,500
Specific gravity at 25°C	ISO 1675 : 1985	1.08	1.08	-
Specific gravity of cured product at 23°C	ISO 2781 : 1996	-	-	1.08
Pot life at 25°C on 150 g (min)	Gel Timer Tecam			14

*Some colour variations may occur without changing the final properties.

MECHANICAL PROPERTIES at 23°C (1)			
Hardness	ISO 868 :2003	Shore D1/D15	67 /64
Tensile modulus	ISO 527 : 1993	MPa	530
Tensile strength	ISO 527 : 1993	MPa	27
Elongation at break	ISO 527 : 1993	%	120
Flexural modulus	ISO 178 : 2001	MPa	450
Flexural strength	ISO 178 : 2001	MPa	28
Tear strength <i>Unnotched angular specimens</i>	ISO 34 :2004	kN/m	94
Impact strength (CHARPY) <i>Unnotched specimens</i>	ISO 179/1eU : 1994	kJ/m ²	unbreakable
BASHORE resilience	ASTM 2632 : 1992	%	62
Abrasion resistance (TABER 1000 revs / H22)	ISO 5470: 1999	mg / 100U	54

PROCESSING CONDITIONS

Polyol and Isocyanate have to be mixed at a temperature equal or higher than 18 °C according to the mixing ratio indicated on the technical data sheet. Isocyanate may be heated to make it more fluid then pot life will be shorter. Before casting, make sure that parts or moulds are free of any trace of moisture.

THERMAL AND SPECIFIC PROPERTIES (1)			
Working temperature	-	-	-40 / +80
Glass transition temperature (Tg)	ISO 11357 : 1999	°C	100
Coefficient of thermal expansion (CTE) (+0 ° to +40 °C)	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹	140
Linear shrinkage (specimen 250x50x3mm)	-	mm/m	5
Maximal casting thickness	-	mm	20
Demoulding time -at 23 °C -at 80 °C	-	hours	16 4
Complete hardening time -at 23 °C -at 80 °C (curing after gel)	-	days hours	6 8

(1) : Average values obtained on standard specimens / Hardening conditions 16 hr at 70 °C

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

Ensure good ventilation

Wear gloves, safety glasses and protective clothes.

For further information, please consult the product safety data sheet.

STORAGE CONDITIONS

Shelf life is 12 months in a dry place and in original unopened containers at a temperature between 20 and 25 °C. Any open can must be tightly closed under dry nitrogen blanket.

IMPORTANT : *if stored at a temperature lower than 15 °C, Isocyanate may crystallize. The part must be placed for 4 to 6 hours in an oven at 50 °C until decrystallization.*

CAREFULL: *Excessive heating of the parts may cause (temperature > 60 °C or heating time >12 hours) a degradation of the product*

PACKAGING

ISOCYANATE	POLYOL
6 x 1 kg	6 x 0.5 kg
1 x 5 kg	1 x 2.5 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.