

APPLICATIONS

Production of parts having mechanical properties close to those of thermoplastics such as polyamide or polyethylene, in prototype and small and medium scale series with an excellent thermal resistance.

Car industry : parts for motor thermal application.

Diverse : any part having good temperature resistance and a high flexural modulus.

PROPERTIES

- Good temperature resistance
- Very easy processing
- High shock resistance
- Good ability for bonding and painting

PHYSICAL PROPERTIES

		PART A RIM 976	PART B RIM 900	MIXING
Composition		POLYOL	ISOCYANATE	
Mix ratio by weight		100	100	
Mix ratio by volume at 25°C		100	89	
Aspect		liquid	liquid	liquid
Colour		black	dark amber	black
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	1,500	1,500	-
Specific gravity at 25°C	ISO 1675 :1985	1.09	1.22	-
Specific gravity of the cured product at 23°C	ISO 2781 :1988	-	-	1.18
Pot life at 25°C on 100g (s)	-			35 - 40

PROCESSING CONDITIONS

Used with a 2-component low pressure injection machine fitted out preferably with an agitator in the polyol tank (part A). Before each use of polyol check there is no crystallization (see Storage §) and plasticate until a homogenous color is obtained. The two parts (polyol and isocyanate) must be mixed at a temperature higher than 18°C according to the mix ratio indicated on the technical data sheet.

It is imperative to cast in tooling heated to a temperature between 55 and 65°C. Before casting check the 851 demoulding agent is applied to moulds free of any trace of moisture (demoulding agent specified for a low pressure injection to 80°C). For further information please see the AXSON's technical data sheet about RELEASE AGENTS.

The optimum properties of the material are obtained after a 2 hours post-curing at 80°C and 2 hours at 130°C.

Caution : according to the part geometry, it may be necessary to use a conformer when post-curing.

REMARKS

The ADEKIT A 310 adhesive of the Axson's range is particularly recommended for bonding this resin to itself or with different materials such as thermoplastics, steel, etc. To repair surfaces to be painted or bonded degrease parts with an alcohol or acetone liquid soap. A polyurethane paint is advised.

MECHANICAL PROPERTIES AT 23°C ⁽¹⁾			
Flexural modulus of elasticity	ISO 178 :2001	MPa	2,000
Tensile strength	ISO 527 :1993	MPa	50
Elongation at break	ISO 527 :1993	%	10
CHARPY shock resistance (Non cut specimens)	ISO 179/1eU :1993	kJ/m ²	40
Hardness	ISO 868 :2003	Shore D1	80

THERMAL AND SPECIFIC PROPERTIES ⁽¹⁾			
Using temperature	-	°C	-20 / +130
Glass temperature transition	ISO 11359 :2002	°C	150
Coefficient of thermal expansion (C _L TE) [0 to +100]°C	ISO 11359 :1999	10 ⁻⁶ K ⁻¹	110
Demoulding time at 23°C	-	min.	10
Maximal casting thickness	-	mm	10
Linear shrinkage on parts at 23°C : - thickness 2 to 3mm - thickness 4 to 5 mm	-	mm/m	5 - 6 8 - 9

(1): Average values obtained on standard specimens, casting in moulds at 60°C / Hardening 4 h 00 at 80°C + 2 h 00 at 130°C.

CONSERVATION - STORAGE

Shelf life is 12 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. The polyol, at low temperature may crystallise (evidence : non homogeneous liquid part). It is advised to heat the product at 40°C to 60°C until a homogeneous liquid product is obtained.

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.

PACKAGING

POLYOL (Part A)
1 x 18 kg

ISOCYANATE (Part B)
1 x 18 kg

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.