

APPLICATIONS

Casting for production of prototype parts and mock-ups having mechanical properties like PP and HDPE, such as instrument panel, bumper, equipment box, cover and anti-vibration tools.

PROPERTIES

- 3-components polyurethane for vacuum casting
- High elongation
- Easy processing
- Flexural modulus adjustable
- High impact resistance, no breakable
- Good flexibility

PHYSICAL PROPERTIES					
		UP 5690-W or -K POLYOL	UP 5690 ISOCYANATE	UP 5690 C	MIXED
Composition		Polyol	Isocyanate	Polyol	
Mix ratio by weight		100	100	0 - 50	
Aspect		liquid	liquid	liquid	liquid
Colour		W= White K= Black	Colourless	Milk white	AW/B/C=White AK/B/C=Black
Viscosity at 23°C (mPa.s)	BROOKFIELD LVT	1000 - 1500	140 - 180	4500 - 5000	500 - 700
Viscosity at 40°C (mPa.s)	BROOKFIELD LVT	400 - 600	-	2300 - 2500	300 - 500
Specific gravity at 25°C Specific gravity of cured product at 23°C	ISO 1675 :1975 ISO 2781 :1988	1.06 -	1.15 -	1.06 -	- 1.13
Pot life at 25°C on 100 g (min)					10 - 15
Pot life at 40°C on 100 g (min)					5 - 7

PROCESSING CONDITIONS (Vacuum casting machine)

- Preheat isocyanate to 23 - 30°C in case of being stored below 20°C .
- Preheat polyol and part C to 40°C before using. *It is necessary to stir the polyol until both color and aspect become homogeneous.*
- Weigh the components according to the mixing ratio, put isocyanate into the upper cup, add part C in polyol to premix.
- Pour isocyanate into polyol (containing Part C) and mix for 1 - 2 minutes after degassing for 10 minutes separately.
- Cast under vacuum in silicone mould preheated to 70°C.
- Demould after 60 - 90 minutes at 70°C (The more Part C is used, the longer demoulding time is needed).

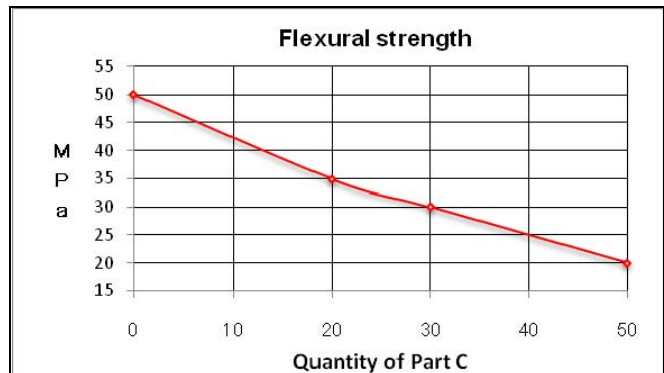
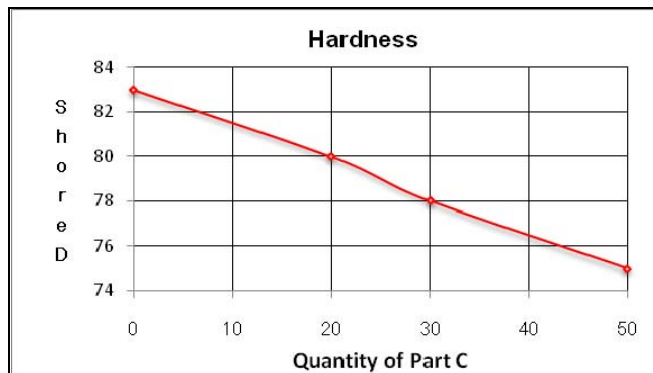
MECHANICAL PROPERTIES at 23°C⁽¹⁾

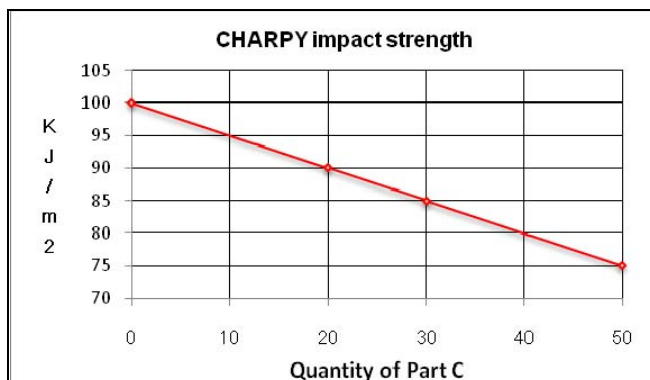
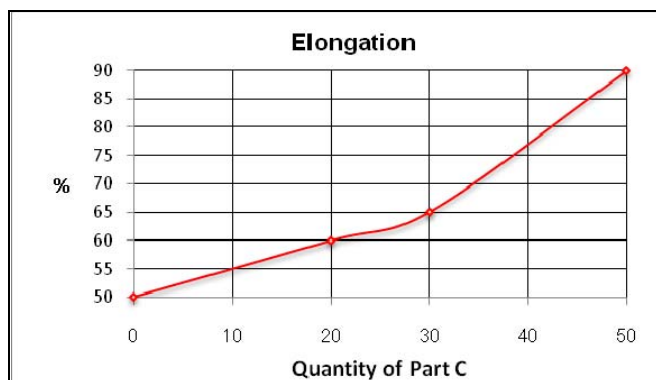
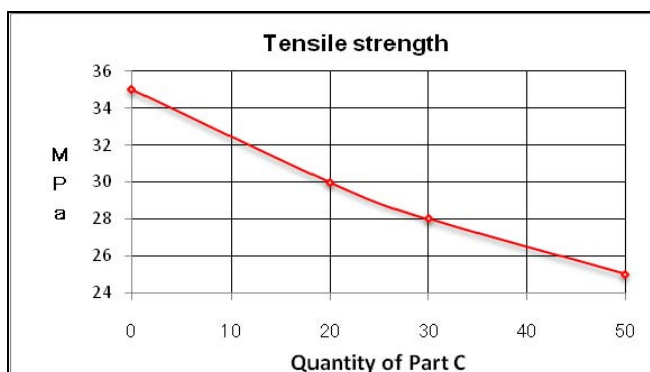
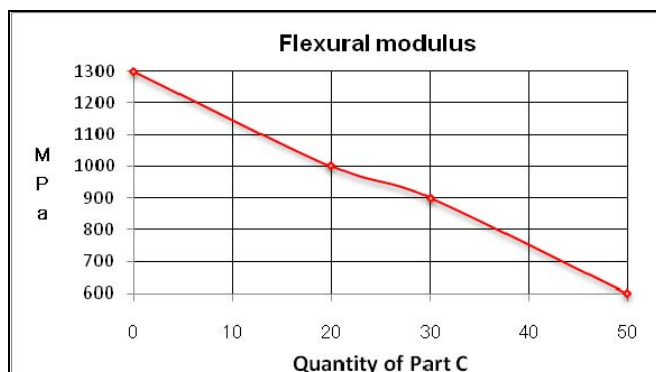
A/B/C			100/100/0	100/100/20	100/100/30	100/100/50
Hardness	ISO 868 : 2003	Shore D	83	80	78	75
Tensile strength	ISO 527 : 1993	MPa	35	30	28	25
Flexural strength	ISO 178 : 2001	MPa	50	35	30	20
Flexural modulus	ISO 178 : 2001	MPa	1300	1000	900	600
Elongation at break	ISO 527 : 1993	%	50	60	65	90
Impact strength (CHARPY) <i>Unnotched specimens</i>	ISO 179/2D : 1994	KJ/m ²	100	90	85	75

THERMAL AND SPECIFIC PROPERTIES

A/B/C		100/100/0	100/100/20	100/100/30	100/100/50
Glass transition temperature (Tg) ⁽¹⁾	°C	85	78	75	65
Linear shrinkage	%	0.35	0.35	0.35	0.35
Demoulding time (2 - 3mm) at 70°C	min	60 - 90			

(1) : Average values obtained on standard specimens / Hardening 16hr at 80°C after demoulding.





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 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

UP 5690-AW/B/C 2x(1+1+1)kg	UP 5690-AK/B/C 2x(1+1+1)kg
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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.