LieuDit Ferme de L'Evêché – CS20308
60723 Pont-Sainte-Maxence CEDEX
France
Tél. : 03 44 31 72 00 – International tel :+33 3 44 31 72 00
Fax : 01 57 67 44 58 – International fax :+33 1 57 67 44 58
E-mail : contact@synthene.com
http://www.synthene.com

PR 700

References

Polyol : PR 700 P - ST 109 000
Isocyanate : PR 7 Series I - ST 000 401

Definition

Polyurethane resin for vacuum casting.
Mercury free product in accordance with the European directives : 2002/96/EC, 2000/53/EC, 2000/11/EC, 2011/65/EC (RoHS) and 2017/2102/EC (RoHS 2)
High thermal resistance (HdT : 130°C).
Easy to cast. Low aggressiveness to silicone moulds.
Good chemical resistance.

Average physical properties of the components

	PR700 Polyol ST 109000	PR7 Series Iso ST 000401	PR 700 ST 109401
Aspect – Color	Black liquid	Transparent liquid colorless	Black liquid
Brookfield Viscosity LVT (mPa.s) According to MO-051	**130**	**1200**	**600**
Density at 25°C According to MO-032	**1.13**	**1.15**	**1.14**

Application properties

	PR700 Polyol ST 109000	PR7 Series Iso ST 000401	Mix ST 109401
Mixing ratio by weight	**80**	**100**	
Mixing ratio by volume	**81.5**	**100**	
Pot life on 200g at 25°C (min.) According to MO-062			**6 - 7**
Demoulding time at 70°C (min.) According to MO-116			**Approx. 45**

Average mechanical and thermal properties of the solid piece

- **All results are obtained after curing 1 h at 70°C +1 h at 100°C + 2 h at 120°C + 24 h at room temperature**

		Test method	
Hardness Shore D1		ISO 868-2003	**82**
Transition glass temperature (Tg)	(°C)	ISO 6721-10 : 2015	**> 130**
Heat deflection temperature (HdT)	(°C)	ISO 75-2 :2015	**130**
Flexural modulus	(MPa)	ISO 178 : 2011	**2300**
Maximum flexural strength	(MPa)	ISO 178 : 2011	**80**
Tensile modulus of elasticity	(MPa)	ISO 527-1 : 2012	**1800**
Elongation at break	(%)	ISO 527-1 : 2012	**13**
Tensile strength	(MPa)	ISO 527-1 : 2012	**60**
Charpy impact (unnotched specimen)	($KJ.m^{-2}$)	ISO 179-1/1eU^{b} : 2010	**60**
Linear shrinkage (3 mm thickness)	(mm/m)	-	**2**

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Hygiene and safety instructions for using

Wearing appropriate safety clothes and accessories (gloves, glasses) is advised.
Work in a ventilated room.
For more information, please read the Medical and Safety Data Sheet of the material.

Application process with vacuum casting machine :

Pre-heat the polyaddition silicone mould at 70°C.
Rehomogenize the polyol component before use.
Weigh the isocyanate component in the upper cup (without forgetting the casting residues).
Weigh the polyol component in the mixing cup
After 10 min of vacuum, pour the isocyanate component in the polyol component and duly mix until total homogeneity of the mixture (approx 50 to 60 sec.)
Cast in the silicone mould.
Put the mould in an oven at 70°C.
Demoulding is possible after 50 min depending on the thickness, then a post-curing is necessary to reach the maximum characteristics.

Packaging :

- Parcel of 2 kits of (4,0 + 5,0) kg
- Parcel of 6 kits of (0.8 + 1.0) kg

For any other packaging, please consult us.

Storage :

18 months in original and unopened containers stored between15 and 25 °C.