UR 3558

Technical Data Sheet

Polyurethane Casting Elastomer

Abrasion Resistant, Room Temperature Cure

Hardness 95 Shore A

Description

UR 3558 is a polyurethane resin with very good abrasion and impact resistance properties used for production of parts and tooling.

Applications

- *Foundry tooling*

Properties

- *Excellent impact resistance*
- *Very good tear resistance*
- *Fast setting*
- *Long pot life*
- *Good abrasion resistance*

Physical Properties

		UR 3558 Iso	UR 3558 Polyol	Mixed
Composition		Isocyanate	Polyol	
Mix Ratio, by weight By volume		100 100	42 42	
Appearance		Liquid	Liquid	Liquid
Color		Colorless	Dark amber	Amber
Viscosity @ 77°F (25°C) (mPa.s)	Brookfield LVT	6,000	125	3,000
Density @ 77°F (25°C) (g/cc)	ISO 1675:1985	1.02	1.01	1.04
Pot life @ 77°F (25°C) 142g (min)	Gel timer			25

PROCESSING

Both parts (polyol and isocyanate) have to be mixed at a temperature equal or higher than 64°F (18°C). Part A may be warmed to reduce the viscosity, however, this will shorten the pot life. Before casting, make sure that parts or molds are free of any trace of moisture.

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Cured Properties at 74°F (23°C) [1]			
Hardness	ISO 868:2003	Shore A	95
Tensile Strength	ISO 37:2004	psi (MPa)	2,300 (16)
Elongation at break	ISO 37:2004	%	460
Tear strength (un-notched angular specimens)	ISO 34:2004	pli (kN/m)	325 (57)
BASHORE resilience	ASTM 2632:1992	%	53
Abrasion resistance (TABER 1000 revs/ H22)	ISO 5470:1999	mg/100 rev.	80
Working temperature		°F (°C)	-40 to 176 (-40 to 80)
Glass Transition Temperature (Tg)	ISO 11357:1999	°F (°C)	<-58 (<-50)
Coefficient of thermal expansion (CTE) (32° – 104°F, 0° - 40°C)	ISO 11359:1999	ppm/°F (°C)	111 (200)
Linear shrinkage (specimen size 10 in. x 2 in. x 0.125 in. (250 mm x 50 mm x 3 mm)		%	0.35
Maximum recommended casting thickness		in. (mm)	2 (50)
Demolding time • At 74°F (23°C) • At 176°F (80°C)		Hours	 8 2
Complete Hardening time • At 74°F (23°C) • At 176°F (80°C)		Hours	 96 4

[1]Average values on laboratory prepared test samples, postcured 16 hours at 158°F (70°C).

Storage Conditions

This product has a shelf life of 12 months as indicated by the expiration date on the container when stored in original unopened containers between 59 – 77°F (15 – 25°C). Any opened can must be tightly closed. If Polyol has crystallized, it can be restored by thoroughly heating to 120 – 130°F (49 – 54°C) and agitating. Do not use if crystallized.

Handling Precautions

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

- *Ensure good ventilation*
- *Wear impervious clothing*
- *Wear gloves, and safety glasses*

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

Disclaimer

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