

TECHNICAL DATA SHEET

UR 3558 A/B

POLYURETHANE CASTING SYSTEM 95 SHORE A HARDNESS

DESCRIPTION

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

APPLICATIONS

- Long Lasting Flexible Molds
- Industrial Wheels
- Drop Hammer Faces
- Washers
- Gaskets
- Foundry Patterns
- Core Box Linings

PROPERTIES

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

PHYSICAL PROPERTIES

Property	Test Method	UR 3558 Part A	UR 3558 Part B	Mixed
Composition		Isocyanate	Polyol	
Mix ratio by weight		100	42	
Mix ratio by volume		100	42	
Appearance		Liquid	Liquid	Liquid
Color		Colorless	Dark amber	Amber
Mixed viscosity at 77°F (25°C) (mPa.s)	Brookfield LVT	6,000	125	3,000
Specific Gravity at 77°F (25°C)	ISO 1675	1.02	1.01	1.04
Pot life at 77°F (25°C) (142 g) (Minutes)	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.

Cured Properties at 74°F (23°C)¹			
Property	Test Method	Units	Test Value
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

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

HANDLING PRECAUTIONS

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

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheets.

STORAGE CONDITIONS

- This product has a shelf life of 24 months for the resin and hardener as indicated by the expiration date on the container when stored in original unopened containers. Store closed containers at 65°F-85°F (18°C-29°). Partially used containers must be flushed with dry nitrogen and resealed. Materials are sensitive to moisture contamination.

PACKAGING

Packaging information on request, please contact your local sales representative or find your local contact on www.sikaadvancedresins.us

LEGAL NOTICE

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