

TECHNICAL DATA SHEET

F100

FILLED FAST CAST POLYURETHANE REGULAR, MEDIUM BLUE, LPL HARDENERS

DESCRIPTION

F100 is a filled fast cast system with three available pot lives. The pot lives range from 5 minutes for the F100, 9 minutes for the F100 Medium Blue, to 14 minutes for the F100 LPL. All three systems' mix ratios are 1 to 1 by weight and by volume. They are ideal for casting small to medium scale series molds. Shrinkage is minimal and the low viscosity allows the product to flow into molds easily, picking up fine details. Uses include dimensional checking fixtures, positioning assemblies, thermoforming tools and prototype parts.

APPLICATIONS

- *Dimensional checking fixtures*
- *Thermoforming tools*
- *Positioning assemblies*
- *Prototype parts*

PROPERTIES

- *Easy to mix*
- *1:1 mix ratio by weight and volume*
- *Rapid demold time*
- *Excellent temperature resistance after demold*
- *Low shrinkage*
- *Low shrinkage*
- *Excellent detail pickup*

Handling Properties					
	Units	F 100 Part A	F 100 Medium Blue Part A	F 100 LPL Part A	F 100 Part B
Composition		Polyol	Polyol	Polyol	Isocyanate
Mix Ratio, by weight		100	100	100	100
Mix Ratio, by volume		100	100	100	100
Aspect		Liquid	Liquid	Liquid	Liquid
Color		Gray	Blue	Gray	Beige
Mixed Viscosity at 77°F (25°C) cPs	ASTM D2393	2,500	2,500	2,500	
Specific gravity @ 77°F (25°C) lbs./gal. (g/cc)	ASTM D792	1.74	1.68	1.65	1.65
Pot time, @ 77°F (25°C) (minutes)	ASTM D2471	5	9	15	
*Demold time (minutes)		30	40	95	
**Demold time (minutes)		25	35	90	

*Steel half cylinder mold, 1 inch (25 mm) diameter, 10 inches (254 mm) long

**Steel half cylinder mold, 4 inch (102 mm) diameter, 10 inches (254 mm) long

PROCESSING

- Thoroughly mix each component separately until a homogeneous mixture is obtained.
- Weigh and mix the components together according to the given ratios.

Physical Properties (MECHANICAL and THERMAL PROPERTIES)				
	Units	F 100 ⁽²⁾	F 100 ⁽²⁾ Medium Blue	F 100 LPL ⁽¹⁾
Volumetric weight - lbs/in ³ (g/cc)		0.061 (1.70)	0.061 (1.68)	0.060 (1.65)
Hardness - Shore D	ASTM D2240	82	80	79
Tensile Strength - psi (MPa)	ASTM D638	4,200 (29)	2,600 (18)	2,600 (18)
Flexural Strength - psi (MPa)	ASTM D790	6,900 (48)	3,400 (2,700)	3400 (2,700)
Flexural Modulus - psi (MPa)	ASTM D790	764,000 (5,300)	390,000 (2,700)	390,000 (2,700)
Compressive Strength - psi (MPa)	ASTM D695	11,000 (76)	7,400 (51)	7,400 (51)
Linear shrinkage ⁽³⁾ - in./in.	ASTM D256	0.003	0.0025	0.0025
%		0.3	0.25	0.25
Tg ⁽¹⁾ - °F (°C)	TMA	122 (50)	112 (45)	128 (53)
Tg ⁽²⁾ - °F (°C)		225 (107)	158 (70)	

The above properties were obtained under laboratory conditions using standardized specimens.

⁽¹⁾ Cured 7 days at 77°F (25°C)

⁽²⁾ Post cured 2 hours at 180°F (82°C)

⁽³⁾ Varies with mass and depth of casting

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 12 months for the resin and hardener as indicated by the expiration date on the container when stored in original unopened containers between 59°F – 77°F (15°C – 25°C).
- It is recommended that opened containers be stored under an inert and/or dry gas cover (ex : dry air, Nitrogen).

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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