

## 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
- Rapid demold times
- Excellent temperature resistance after post cure
- Low shrinkage
- Low viscosity

PHYSICAL PROPERTIES					
		F100 Part A	F100 Medium Blue Part A	F100 LPL Part A	F100 Part B
Composition		Polyol	Polyol	Polyol	Isocyanate
Aspect		Liquid	Liquid	Liquid	Liquid
Color		Gray	Blue	Gray	Beige
Viscosity at 77°F (25°C) cPs.	ASTM D2393	2,000 – 3,000	2,000 – 3,000	2,000 – 3,000	1,500 – 3,000
Specific Gravity at 77°F (25°C)	ASTM D792	1.74	1.68	1.65	1.65
Mixed Properties					
		F100	F100 Medium Blue	F100 LPL	
Mix ratio by weight A/B		100	100	100	
Mix ratio by volume A/B		100	100	100	
Cured Density at 77°F (25°C) (g/cm <sup>3</sup> )	ASTM D792	1.70	1.68	1.65	
Mixed Viscosity at 77°F (25°C) cPs	ASTM D2393	2,500	2,500	2,500	
Pot life at 77°F (25°C) (minutes)	ASTM D2471	5	9	14	
Demold time (minutes)		30* 25**	40* 35**	105* 90**	
Hardness at demold (Shore D)	ASTM D2240	50	60	58	

\*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.

**MECHANICAL and THERMAL PROPERTIES<sup>(1)</sup>**

			F100 <sup>(3)</sup>	F100 Medium Blue <sup>(3)</sup>	F100 LPL <sup>(2)</sup>
Volumetric weight		lbs/in <sup>3</sup> (g/cc)	0.061 (1.70)	0.061 (1.68)	0.060 (1.65)
Hardness	ASTM D2240	Shore D1	82	80	79
Tensile Strength	ASTM D638	psi (MPa)	4,200 (29)	2,600 (18)	2,600 (18)
Flexural Strength	ASTM D790	psi (MPa)	6,900 (48)	3,400 (23)	3,400 (23)
Flexural Modulus	ASTM D790	psi (MPa)	764,000 (5,300)	390,000 (2,700)	390,000 (2,700)
Compressive Strength	ASTM D695	psi (MPa)	11,000 (76)	7,400 (51)	7,400 (51)
Linear shrinkage <sup>(4)</sup>	ASTM D256	in./in. %	0.003 0.3%	0.0025 0.25% <sup>(2)</sup>	0.0025 0.25%
Tg <sup>(2)</sup>	TMA	°F (°C)	122 (50)	112 (45)	128 (53)
Tg <sup>(3)</sup>			225 (107)	158 (70)	

<sup>(1)</sup> The above properties were obtained under laboratory conditions using standardized specimens.

<sup>(2)</sup> Cured 7 days at 77°F (25°C)

<sup>(3)</sup> Post cured 2 hours at 180°F (82°C)

<sup>(4)</sup> Varies with mass and depth of casting

## STORAGE CONDITIONS

Product is guaranteed for 9 months in a dry place and in original unopened containers at a temperature between 59 – 77°F (15 – 25°C). Any opened can must be tightly closed.

## HANDLING PRECAUTIONS

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

- Ensure good ventilation
- Wear gloves, safety glasses and impervious clothes.

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

## GUARANTEE

The information contained in this technical data sheet result from research and tests conducted in our Laboratories 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 guarantee the conformity of their products with their specifications but cannot guarantee 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 responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications