

Product Name

F-170 A/B

70 Shore A Polyurethane Elastomer

Product Description

The F-170 A/B system is a production oriented fast gel and fast demould material. F-170 has a work life which allows sufficient time to vacuum de-gas and pour air-free parts. It features an easy mix ratio, low viscosity and short demould times.

The F-170 is ideal for: Part Production, Moulds, Special Effects & Props, Potting, Pigmenting.

Physical Properties	Test Method	7 Day Ambient Cure	21 Day Ambient Cure	Elevated Temperature Cure *
Hardness, Shore A	ASTM D2240-04el	70 ±5	70 ±5	70 ±5
Density (g/cc)	ASTM D792-00	1.09	1.09	1.09
Cubic Inches Per Pound	N/A	26	26	26
Color/Appearance	Visual	Trans Amber	Trans Amber	Trans Amber
Tensile Strength (psi)	ASTM D412-98a(2002)el	1429	1574	1803
Tensile Modulus (psi)	ASTM D412-98a(2002)el	695	529	405
Elongation (%)	ASTM D638-03	1183	1430	1147
Tear Strength (pli)	ASTM D624-00el	225	234	245
Shrinkage (%)	ASTM D2566 @ 1" depth	0.0025 ^	TBD	TBD
Dielectric Constant, 1 MHz	ASTM D150-87	4.987	4.987	4.987
Dissipation Factor, 1 MHz	ASTM D150-87	0.043	0.043	0.043

Note: * Reported physical properties based on Cure Schedule/Heat Curing page 2.

^ Shrink test specimens are cured for 24 hrs at room temperature and then 16 hrs at 71°C

Handling Properties	Test Method	Part A	Part B
Mix Ratio	By Weight	50	100
Mix Ratio	By Volume	47	100
Specific Gravity	@ 25°C	1.12	1.04
Colour	Visual	Pale Yellow	Amber
Viscosity	Cps	730	1255
Mixed Viscosity	@ 25°C	1 120	
Work Time	100g @ 25°C	5 - 5.5 minutes	
Gel Time	@ 25°C	6 - 7 minutes	
Demould Time	@ 25°C	2 - 3 hours	

Cure Schedule/Heat Curing

Most of the physical properties can be achieved in 5-7 days at ambient temperature, 25°C. In order to achieve maximum physical properties, a post cure with heat is required. BJB recommends 1-3 hours at 25°C, followed by 16 hours at 71°C. Do not exceed curing temperature of 93°C.

Storage

Store at room temperature in a dry place. Unopened containers will have a shelf life of 6 months from date of shipment when properly stored under normal conditions at 25°C. Purge opened containers with dry nitrogen before re-sealing.

Notes

The colour of the base material may vary slightly from batch to batch due to raw ingredients. Colour variations will not affect the cured physical properties. Exposing the material to various conditions such as heat and UV light will alter the colour of the cured system. Colour stability is not guaranteed. This product can be pigmented, but you may see more colour shift when using lighter pigments.

The cure will be inhibited if cast against a tin catalyzed silicone RTV.

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1

Disclaimer

The data presented in this leaflet are in accordance with the present state of our knowledge, and does not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. Recommendations for use do not constitute a warranty, either expressed or implied, of the fitness or suitability of the product for a particular purpose.

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