

Product Name

F-190 A/B

90 Shore A Polyurethane Elastomer

Product Description

The F-190 A/B system is a production oriented fast gel and fast demould material. F-190 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-190 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	90 ±5	90 ±5	90 ±5
Density (g/cc)	ASTM D792-00	1.091	1.091	1.091
Cubic Inches Per Pound	N/A	25.82	25.82	25.82
Color/Appearance	Visual	Trans Amber	Trans Amber	Trans Amber
Tensile Strength (psi)	ASTM D412-98a(2002)el	1819	2101	3112
Tensile Modulus (psi)	ASTM D412-98a(2002)el	3314	3620	2995
Elongation (%)	ASTM D638-03	843	1007	776
Tear Strength (pli)	ASTM D624-00el	345	372	394
Shrinkage (%)	ASTM D2566 @ 1" depth	0.0025 ^	TBD	TBD
Dielectric Constant, 1 MHz	ASTM D150-87	5.003	5.003	5.003
Dissipation Factor, 1 MHz	ASTM D150-87	0.053	0.053	0.053

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	100	50
Mix Ratio	By Volume	100	49
Specific Gravity	@ 25°C	1.07	1.07
Colour	Visual	Pale Yellow	Amber
Viscosity	Cps	3680	1450
Mixed Viscosity	@ 25°C	3 530	
Work Time	100g @ 25°C	5 – 5.5 minutes	
Gel Time	@ 25°C	7 – 7.5 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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