

## F-164 FR REV 1 A/B 60 SHORE A FIRE RETARDANT POLYURETHANE ELASTOMER



F-164 FR REV 1 is a castable polyurethane elastomer containing fire retardants that will meet a UL 94V-2 rating. The F-164 FR REV 1 is useful in applications where a tough, 60 Shore A rubber with self-extinguishing properties, is required.

- RoHS/REACH Compliant
- Popular for Parts Requiring "FR"
- High Tensile & Tear Strength
- Special Effects & Props
- Over Molding
- Prototypes/Production

PHYSICAL PROPERTIES	TEST METHOD	ELEVATED TEMPERATURE CURE*
Hardness, Shore A	ASTM D2240-04e1	60 ± 5
Density (g/cc)	ASTM D792-00	1.101
Cubic Inches per Pound	N/A	25.65
Color/Appearance	Visual	Translucent Amber
Tensile Strength (psi)	ASTM D412-98a(2002)e1	720
Tensile Modulus (psi)	ASTM D412-98a(2002)e1	650
Elongation (%)	ASTM D412-98a(2002)e1	290
Tear Strength (pli)	ASTM D624-00e1	85
Shrinkage (in/in) linear	ASTM D2566 @ 1" depth	0.001 <sup>†</sup>
Dielectric Constant, 1 MHz	ASTM D150-87	7.598
Dissipation Factor, 1 MHz	ASTM D150-87	0.0555

\*Note: Reported physical properties are based on test specimens cured 1-3 hours at room temperature then 16 hours at 160°F (71°C).

<sup>†</sup>Shrink test specimens are cured for 24 hours at room temperature and then 16 hours at 160°F (71°C).

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	50	100
Mix Ratio by volume (cartridge dispense friendly)	44	100
Specific Gravity @ 77°F (25°C)	1.175	1.035
Color	Pale Amber	Amber
Viscosity (cps) @ 77°F (25°C) Brookfield	800	920
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	1,050	
Work Time, 100g mass @ 77°F (25°C)	9 – 10 minutes	
Gel Time	12 – 13 minutes	
Demold Time @ 77°F (25°C)	2 – 3 hours	

Properties above are typical and not for specifications.

**CURE SCHEDULE/HEAT CURING:**

Most of the physical properties can be achieved in 5-7 days at 77°F (25°C). You may use your own post-cure schedule but the physical properties may vary from BJB’s cure schedule of 1-3 hours at 77°F (25°C) followed by 16 hours at 160°F (71°C). Do not exceed curing temperature of 200°F (93°C).

**ACCESSORIES:**

BJB offers silicone RTV mold making materials along with a wide range of accessory items. These include de-airing agents, pigments, mold releases, and Jiffy® Mixers. Visit BJB’s website at [www.bjbenterprises.com](http://www.bjbenterprises.com) or consult a BJB representative for more information.

**COLOR VARIATIONS:**

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

**UV RESISTANCE:**

This product is not classified as UV resistant. BJB offers an additive called UV-100, a UV inhibitor and anti-oxidant blend that will help slow down the effects of UV degradation and color change. The level of effectiveness varies from product to product.

**STORAGE:**

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING	Part A	Part B	Cubic Inches per Kit
Gallon Kits	4 lbs.	8 lbs.	308
5-Gallon Kits	20 lbs.	40 lbs.	1,539
55-Gallon Drum Kits	220 lbs.	440 lbs.	16,929

**SAFETY PRECAUTIONS:**

Use in a well-ventilated area. Avoid contact with skin using protective gloves and protective clothing. Repeat or prolonged contact on the skin may cause an allergic reaction. Eye protection is extremely important. Always use approved safety glasses or goggles when handling this product.

**IF CONTACT OCCURS:**

**Skin:** Immediately wash with soap and water. Remove contaminated clothing and laundry before reuse. It is *not* recommended to remove resin from skin with solvents. Solvents only increase contact and dry skin. Seek qualified medical attention if allergic reactions occur.

**Eyes:** Immediately flush with water for at least 15 minutes. Call a physician.

**Ingestion:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

**Refer to the Material Safety Data Sheet before using this product.**

**⚠WARNING:** This product can expose you to chemicals including Naphthalene, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



Handling Guide

NON-WARRANTY "Except for a warranty that materials substantially comply with the data presented in Manufacturer's latest bulletin describing the product (the basis for this substantial compliance is to be determined by the standard quality control tests generally performed by Manufacturer), all materials are sold "AS IS" and without any warranty express or implied as to merchantability, fitness for a particular purpose, patent, trademark or copyright infringement, or as to any other matter. In no event shall Manufacturer's liability for damages exceed Manufacturer's sale price of the particular quantity with respect to which damages are claimed."