



Factor II, Incorporated

Inventing and Innovating...
(Information: 1.928.537.8387)
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PRODUCT INFORMATION

Class IV Elastomers A-120, A-135, A-150, A-165, A-180

Parts A & B

PRODUCT DESCRIPTION:

FACTOR II Class VI Elastomers (A-120 A-135, A-150, A-165, A-180) Parts A & B are a series of two-part platinum-catalyzed silicone elastomers. Each elastomer is supplied as a two-part kit (Part A & Part B), equal portions of which must be thoroughly blended together prior to use. The elastomer is thermally cured via an addition-cure (platinum-catalyzed) reaction. When blended and cured as indicated, the resulting elastomer consists of crosslinked dimethyl and methyl-vinyl siloxane copolymers and reinforcing silica.

The elastomers are available in a range of nominal hardness from 20 to 80, durometer, Shore A. The elastomers can normally be used without any post-cure, although if necessary, this may be employed to stabilize final properties. Furthermore, the elastomers are heat stable up to 204°C (400°F), can be autoclaved, and exhibit high gas permeability compared with most thermoset elastomers and thermoplastics.

How To Use:

These elastomers are supplied as two-component kits (Parts A & B) that must be thoroughly mixed in equal portions, by weight, prior to use. Typically, a two-roll mill is used for the blending process. If stored in a cold environment, warming to room temperature before unwrapping can help avoid condensation on the elastomer, which may cause voids in molded or extruded parts.

Blending:

When using a two-roll mill, it is recommended to first soften the required amount of Part B while the mill is cool. Remove this from the mill and then soften the same amount, by weight, of Part A. When the Part A is sufficiently pliant, the Part B can be returned to the mill and the two Parts thoroughly cross-blended together. Blend only the amount that will be used in 3 to 4 hours. If carefully wrapped, blended material may be stored in a freezer <0°C (<32°F) for up to 7 days. Material stored in this manner should be warmed to room temperature before unwrapping to avoid condensation on the elastomer. Condensation may cause voids in molded or extruded parts. Caution: The temperature of the blended material should be kept as low as possible to give maximum table life or working time.

Cure:

Cure of the blended elastomer is accelerated by heat. The elastomer will cure in a mold cross-section up to 1.905mm (0.075 inch) thick in approximately 10 minutes at 116°C (240°F). Proportionally more time is required to cure thicker cross-sections. Caution: The cure may be inhibited by traces of amines, sulfur, nitrogen oxide, organotin compounds and carbon monoxide. Because organic rubbers often contain these substances, they should not come in contact with the uncured elastomer. Catalyst residues from some room temperature vulcanized and peroxide-cured silicone elastomers may also inhibit the cure.

All equipment should be thoroughly cleaned at the end of each use to avoid a build-up of cured stock, which is very difficult to remove. The residue may result in crumbs of elastomer being picked up by the next lot, causing imperfections.

Post Curing

These materials crosslink via an addition-cure (platinum-catalyzed) reaction. No organic residues such as peroxides or their by-products are present and post-cure is not normally required for most applications. The user must confirm that



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molding conditions or short oven cures are suitable for any specific application. The principal volatile components evolved during post-curing are low molecular weight polydimethyl- siloxanes and water vapor.

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Product name	Durometer (Shore A)	Tensile Strength (psi)	Elongation (%)	Tear Strength (ppi)
A-120	22	1427	1283	184



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A-135	36	1201	1117	201
A-150	50	1545	976	244
A-165	61	1168	939	241
A-180	77	1049	614	223