

Flex Series

Flexible Urethane Elastomers

20A, 50A, 60A, 70A, 80A

Product Description:

Alumilite's entire line of Flex systems range in hardness from soft flexible urethane rubber (20A) for automotive, medical, and gasket applications all the way to very hard durometers (80A) used for industrial rollers, nests, fixtures, and bumpers in a wide variety of industries. The Flex line of urethane elastomers are extremely tough, yet extremely easy to use. The low viscosity of the Flex systems allow for excellent detail and part reproduction. Although vacuum or pressure assistance is recommended for casting perfectly bubble free/dense parts every time, it is not required when pouring simple parts. The materials feature a 4-minute work time and a demold time of 2 hours at room temperature (depending on mass). Post curing the parts at 150 degrees F will accelerate the cure and demold time. Full cure is 72 hours. Alumilite's Flex series are also great for making flexible rubber molds for resin, concrete, plaster, silicone and more. Mold release is required when using the Flex line to ensure the Flex systems do not bond.

Product	Color	Mixed Viscosity	Specific Gravity	Shore A Hardness	Linear Shrinkage in/in	Tensile Strength	Elongation %	Tear Strength
Flex 20	Ivory	520 cps	1.01	20A	0.005	250 psi	770%	50 ppi
Flex 50	Translucent Yellow	550 cps	1.03	50A	0.002	250 psi	200%	50 ppi
Flex 60	Translucent Yellow	625 cps	1.03	60A	0.0026	345 psi	235%	70 ppi
Flex 70	Translucent Yellow	680 cps	1.05	70A	0.0041	730 psi	175%	130 ppi
Flex 80	Translucent Yellow	1600 cps	1.06	80A-85A	0.0013	1332 psi	250%	190 ppi

Blending to create a Flex 30: Measure and mix 50% Flex 20 A with 50% Flex 50 A side. Then measure and mix 50% Flex 20 B side with 50% Flex 50 B side. Once both sides have been combined, simply mix the new Flex 30 A side 1:1 by weight or volume with the new Flex 30 B side to create a 30 Shore A hardness.

Blending to create a Flex 40: Measure and mix 25% Flex 20 A with 75% Flex 50 A side. Then measure and mix 25% Flex 20 B side with 75% Flex 50 B side. Once both sides have been combined, simply mix the new Flex 40 A side 1:1 by weight or volume with the new Flex 40 B side to create a 40 Shore A hardness.

Instructions:

Preheat your mold to 130-150 degrees F. Shake both the A & B side before using. Measure equal amounts (1:1) by weight. Mix thoroughly being sure to scrape both the sides and bottom well to ensure a complete mix. Once mixed thoroughly, vacuum the mixed material to remove any air. If you do not have vacuum, mix more slowly to avoid introducing air into the mixed material. Once vacuumed, slowly pour the material down the side of the mold until filled. Once the Flex has gelled (4-minute point), post cure the resin at 120-150 degrees F for 2 hours. Allow it to cool, then demold. Full cure is 72 hours. If you are not post curing the resin, allow it to cure for 18-24 hours at room temperature prior to demolding.

Coloring:

Alumilite's Flex Series can be colored using Alumilite's Coloring Dyes. Only a small percentage (1-5% maximum of dye into the B side of the Flex) is required to effectively color the Flex Series urethane elastomers

from Alumilite. Only add the smallest amount necessary to achieve the desired color. Too much dye can cause the cast piece to not crosslink entirely resulting in a piece with no tear strength and a part that crumbles rather than flexes. When coloring the Flex preheating your mold and post curing the part after being poured is required. **Note: For Flex 50, 60, 70 & 80 (because they are translucent yellow) white dye must be used in combination with colored translucent dyes to produce opaque castings.**

Storage:

Store the Flex materials at 70 degrees F or above in a dry location. Cold temperatures and moisture will thicken the B Side. If the B side thickens, safely warm the B side up to at least 100 degrees F and shake to bring the material back to its proper viscosity. Once it cools down, it is ready to use. One way to warm the material is to place the bottle over or near a register to bring the temperature up being sure not to overheat or melt the container. Another is to place the closed bottle in a pot of water and slowly bring the temperature of the water up until the B side can be shaken and brought back to its original viscosity.

Packaging:	32 oz	16 fl.oz. A/16 fl.oz. B
	2 gal	1 gal A/1 gal B
	10 gal	5 gal A/5 gal B
	110 gal Drum Kit	55 gal A/55 gal B