

Alumilite's Flexible Foam

3lb. Density

Product Description:

Alumilite's Flexible Foam 3lb Density is an easy to use, versatile, high tear strength, 2 part expandable flexible foam. It's ideal for making soft foam pieces and also is great for prototyping or casting cushions, vibration dampeners, or flexible nests/fixtures. Simply mix equal amounts of the two components together and then pour. The 2 parts will chemically react and begin to expand before curing into a beautiful 3-4 lb density flexible foam. Alumilite's Flexible Foam 3lb Density is able to produce a high quality skin against your mold surface. It also gives you the ability to "pack" the foam to increase the density of the cured foam.

Physical Properties:

Color	White
Mixed Viscosity (cps)	400 cps (200cps-A/600cps-B)
Density	3-4 lbs (based on open or closed mold)
Specific Gravity	1.05
Expansion	3-5 times the original liquid volume

General Properties:

Color	"A" Side	Cloudy
	"B" Side	Pale Yellow
Mix Ratio		1:1 by wt. or vol.
Shelf Life		1 year
Open Time at 75 Degrees F (100g mass)		45 seconds
Rise Time at 75 Degrees F (100g mass)		60 seconds
Demold Time at 75 Degrees F (100g mass)		30 minutes
Full Cure Schedule		72 hours

Packaging:	16 oz
	32 oz
	2 Gallon
	10 Gallon
	Drum Kit

Safety: Read complete labels, SDS, and technical data sheet including instructions before using.

Instructions

Keep Alumilite out of the reach of children, do not take internally, and do not use in any way other than it's intended use.

1. Before Starting

Make sure your work area is appropriate for measuring, mixing, and pouring casting resins that can and will stain any porous materials such as carpet and clothing. Also make sure to use and store materials in an area where children cannot reach or access.

2. Mold Preparation

Preheat your mold to 130-150 degrees F. Mold release is required for any non silicone molds used. Mold release is also recommended but not required when using silicone rubber molds.

3. Mixing & Pouring

Shake both the A & B side. Measure equal amounts by weight or volume. Mix thoroughly being sure to scrape both the sides and bottom well to ensure a complete mix. Once mixed thoroughly, pour the material down the sides of the mold, wetting out as much of it as possible. The Flex Foam will start to rise around the 60 second point. If you are going to "pack" the foam, mold release a piece of non porous plastic or metal and lay it over the back of the mold leaving only one small corner of the mold open as a breather hole to allow the pressure to release. Allow to cure for a minimum of 30 minutes to ensure the skin has cured enough to safely remove it from your mold.

To produce the best skin possible, mix long into the open time and pour as late as possible to fill the entire cavity without trapping voids. This late pour technique allows for a tighter surface quality. If the part is too detailed and you cannot pour late into the mix time, be sure to tilt, rotate and coat the entire mold surface with mixed Alumilite's Flexible Foam 3lb Density prior to it expanding. This will also improve the surface quality of the cast Flex Foam piece.

4. Coloring

Alumilite's Flexible Foam 3lb Density can be colored using Alumilite's Coloring Dyes. Only 1-2% of dye is required to effectively color the Flex Foam.

Painting can be achieved but requires a flexible paint that won't crack when your cast part flexes and is best if painted immediately after demolding while the resin is still curing. Once the resin has completely cured, paint adhesion is not as strong. Most flexible paints will still bond but may scratch off easier if not applied while the resin is still curing. Another option is to paint your silicone rubber mold, allow the flexible paint to dry, and then cast your resin into the mold. The Alumilite's Flexible Foam 3lb Density will chemically bond to the dry flexible paint, and once the resin cures you will demold a perfectly painted piece that moves and flexes as the part does.

5. Storage

Store the Alumilite's Flexible Foam 3lb Density 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.

6. Mold Release

To achieve maximum parts out of your silicone molds or to ensure release out of non-silicone molds (aluminum, urethane elastomers, latex, or any other substrate), we recommend using Alumilite's Stoner Urethane Mold Release. This offers maximum release and puts an effective layer of release on non-porous surfaces to release Alumilite Casting Resins. When using the Stoner Mold Release, some release will transfer to the cast resin part after demolding and may interfere with the ability to paint or bond the cast resin piece. A mild solvent wash may be required to remove the Stoner from the casting.

Alumilite does offer a "Paintable" mold release called UMR. UMR can be used as a release between silicone to silicone, urethane to urethane, silicone to urethane, and much more. It is an all-purpose mold release that does not interfere with painting unless excessive amounts are used and transferred to your casting.

7. Work Area & Clean Up

Mixed Alumilite resins will absorb into porous materials and will stain! Avoid clothing, carpet, upholstery, and any other porous materials which will stain and will not come out. Resin casting is best done in a designated work area such as a basement, garage, or hobby room with adequate air movement or ventilation. Cover any surfaces including floors with plastic sheeting, cardboard, or plywood to prevent damage from spilled resin. To clean up unmixed or still liquid material, use rubbing alcohol on a rag or paper towel to quickly clean and remove. Once cured, the resin is extremely durable and chemical resistant and nearly impossible to remove. There are a

couple solutions out in the market that claim to dissolve cured urethanes. If you are in need of such a material, please call us and we can refer you to some possible solutions.

8. Moisture Contamination

Relative humidity or moisture will react with the B side of Alumilite's Flexible Foam 3lb Density and crystalize. You may notice crust, crystals, or chunks around the tip or cap or in the bottom of the bottle. If the B side shows signs of moisture contamination, you may need to strain the chunks or crystals with a paint filter or screen to remove them from the resin. Once strained, the B side can be used as normal. However, if the A side has been contaminated by moisture, it will not show any signs of contamination until you cast your piece in which you will notice an excess amount of bubbles or perhaps even a froth or foam on the top side of your casting. Once the polyol side (A side of Alumilite Foams) has been contaminated with moisture it is extremely difficult to restore. Vacuuming the resin for a long period of time may vaporize and pull the moisture out or a molecular sieve can be mixed in and allowed to react and settle to the bottom with some success.

9. Shelf Life

The shelf life of Alumilite Foams is 1 year in an unopened container but a much longer shelf life can be expected even after being opened as long as it is sealed and stored in an area free from moisture contamination (humidity and changing of temperatures such as a garage).