



Lightweight Epoxy Filler

Part # - 1100

Extremely lightweight epoxy filler used to smooth the surface of repaired parts, fill the weave on moldless or male molded parts, and shape fillets in corners and joints. This epoxy filler provides superior adhesion to most surfaces including SMC, and exhibits no shrinkage. It spreads smoothly with few sags, even upside down! Final contours are easily sanded with standard shop tools.

PRODUCT FEATURES

- Very Light Weight Material
- Non-Hazardous Product - Safe to Use
- Easily Sanded & Carved with Shop Tools
- Negligible Shrinkage
- Non-Critical, 2 to 1 Ratio by Weight or Volume
- Excellent Non-Sag Properties - Even Upside Down!
- Slightly Flexible Cure - Not Brittle in Thin Sections
- Excellent Adhesion to a Variety of Surfaces
- Stable Formula - No Separation of Components in Storage

DESCRIPTION

Lightweight Epoxy Filler is a two-component paste epoxy patching and filler compound for foam, wood, fiber glass and other surfaces. The mixed consistency of this system is very smooth and creamy, so it spreads easily, and can be sanded to a feather edge without separation. It is a thixotropic, non-sag material that will remain in place in thick sections, even when applied upside down! The resin and hardener of this system are color coded for easy mixing. The resin is white and the hardener is brown, giving a good visual indication of complete mixing with a uniform tan color free of streaks. Lightweight Epoxy Filler has special low density fillers incorporated into it that provide very distinct benefits. It is a very light material (4 pounds per gallon), and therefore contributes minimal added weight to the filled or repaired structure. Also, the cured material is very easy to sand, making the finished patch undetectable when covered or painted. There are no volatile ingredients in Lightweight Epoxy Filler, so the cured material will not outgas, which could cause a loss of adhesion of paint or coverings. Lightweight Epoxy Filler is a modification of our ES6279 high performance adhesive system, therefore it has excellent adhesion to a wide variety of materials. It is not corrosive to metals, and will not promote corrosion on these surfaces, so bond line stability and long term adhesion are excellent. Lightweight Epoxy Filler is a non-toxic material. There are no hazardous or restricted raw materials in either the resin or hardener of this system.

DIRECTIONS FOR USE

PREPARATION: All surfaces to be bonded or patched must be free of dirt, oil and grease. Sanding or roughening the surface to be bonded increases the surface area and enhances the bond.

MIXING: The mix ratio of Lightweight Epoxy Filler is 2 parts resin (Part A) to 1 part hardener (Part B) by weight or volume. Measure the correct amount of Parts A and B, combine, and mix thoroughly until a uniform color and consistency is reached. Mix for at least 1 to 2 minutes, scraping the sides and bottom of the container to avoid leaving unmixed material that will cause soft spots in the cured epoxy. A uniform tan color, free of light or dark streaks indicates properly mixed material.

APPLICATION: After mixing, Lightweight Epoxy Filler must be used within 25 to 30 minutes for best surface wetting and adhesion. For filling pinhole porosity and shallow defects, Lightweight Epoxy Filler can be splayed into the area, filling the defects and striking off the excess, leaving a smooth surface. Depending upon the final finish required, sanding of this type of repair may not be necessary, as Lightweight Epoxy Filler exhibits negligible shrinkage upon curing. For thicker sections, such as deep holes or gouges, it is advisable to apply the mixed material in layers to reach the final thickness. The layers will be applied in rapid succession. There is no need to let each layer gel or cure. The purpose of this technique is to prevent trapping air pockets that would weaken the cured material. In instances of filling large areas and irregular surfaces, it is usually not possible to apply the patching material to the exact contour. In those situations, leave the excess material on the surface, and the high spots can be easily sanded back to contour when the epoxy has cured.

CURING: Lightweight Epoxy Filler will cure completely at room temperature. This cure can be accelerated with mild heat if necessary. This heat addition can be accomplished by placing the patched part in the sun light to warm it; by putting it into a warm room or industrial oven at very low heat; or by placing light bulbs in a box containing the part. Avoid the use of hot air guns or heat lamps, as they develop entirely too much heat, and tend to concentrate the heat in small areas. This excessive heat can cause shrinkage and improper cures.

FINISHING: Lightweight Epoxy Filler develops "green strength" rather rapidly, and at normal shop temperatures it can be carved and shaped with rasps or shaving tools in 2 to 3 hours. As it continues to cure, in 5 to 6 hours it is to the point at which it can be sanded without loading the emery cloth or sand paper. In some instances, it may not be possible, or desirable, to sand the cured surface of Lightweight Epoxy Filler. For example; patching a foam surface, or patches that will be covered with film or fabric. In these instances, the surface of the patch is smoothed to the desired shape and allowed to cure. A technique that works well here is to lay a piece of clear "cling wrap" such as Saran Wrap over the patch and smooth it down to evenly contact the Lightweight Epoxy Filler. When the patch has cured, the cling wrap can be peeled off, leaving a smooth, even surface ready to cover.

CLEANUP and SAFETY: Lightweight Epoxy Filler can be removed from hands and tools (before it gels) with warm soapy water. In general, in the case of partially gelled epoxies on tools, common solvents should remove it. Once the epoxy has cured hard on tools, abrasive action, such as wire buffer wheels or a grinder will be necessary. Lightweight Epoxy Filler is a safe, non-hazardous system with minimal potential for reaction to the user. It should be noted, however, that persons who might be overly sensitive to chemicals, due to individual body chemistry or prior exposure could show some response to any epoxy system. As with all industrial materials, if the products are used in a responsible manner, and cleaned off the skin as soon as possible, the chances of adverse reaction are minimal.

Product Specifications

	Light Part A	Light Part B	ASTM Method
Color	White	Light Red	Visual
Viscosity, @ 77° F, centipoise	Paste	Paste	ASTM D2393
Specific Gravity, gms./cc	0.49	1.49	ASTM D1475
Mix Ratio	2 to 1 By Weight or Volume		PTM&W
Pot Life, 4 fl. Oz. Mass @ 77° F	25 - 30 minutes		ASTM D2471

Typical Mechanical Properties

	Light A / B	ASTM Method
Color	Light Oxide Red	Visual
Mixed Viscosity, @ 77° F, centipoise	Smooth Thixotropic Paste	D2393
Cured Hardness, Shore D	53 Shore D	D2240
Gel Time, 4 fluid ounces, @ 77° F	25 - 30 minutes	D2471
Cure Time, @ 77° F	To Shape: 2 to 3 Hours To Sand: 5 to 6 Hours Full Cure: 24 Hours	PTM&W
Specific Gravity, gms./cc	Excellent	D1475
Adhesion	1.51	PTM&W
Water Absorption	< 0.4 %	D570
Compressive Strength, psi	2,156 psi	D695