



# ES6249 Lightweight Carvable Adhesive & Patching Compound

## 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

ES6249 is a two-component paste epoxy patching and filler compound for foam, wood, fiberglass and other surfaces. The mixed consistency of this system is very smooth and creamy, so it spreads easily, and can be splined 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. ES6249 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 ES6249, so the cured material will not outgas, which could cause a loss of adhesion of paint or coverings.

ES6249 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. ES6249 is a non-toxic material. There are no hazardous or restricted raw materials in either the resin or hardener of this system.

## PRODUCT SPECIFICATIONS

	ES6249		Test
	Part A	Part B	Method
Color	White	Brown	Visual
Viscosity	Paste	Paste	ASTM D2393
Specific Gravity	0.490	0.490	ASTM D1475
Pot Life	25 - 30 minutes		ASTM D2471
Mixing Ratio	2 to 1 By Weight or Volume		PTM&W

## PACKAGING WEIGHTS

	Quart Kit	Gallon Kit
ES6249 A	1 lb.	4 lb.
ES6249 B	.5 lb.	2 lb.
Kit	1.5 lb.	6 lb.

## TECHNICAL DATA

	ES6249 A/B	Test Method
Mix Ratio, Part A : Part B	2 : 1 By Weight or Volume	PTM&W
Mixed Viscosity	Smooth Thixotropic Paste	ASTM D2393
Gel Time, 4 fl. ounces	25 - 30 min.	ASTM D2471
Cure Time, @ 77°F		
To Shape	2 to 3 hours	PTM&W
To Sand	5 to 6 hours	
Full Cure	24 hours	
Color	Light Tan	Visual
Specific Gravity, gms./cc	0.490	ASTM D1475
Density	.0178 lb. / cu. in. 4 lb. / Gallon	ASTM D792
Cured Hardness, Shore D	53 Shore D	ASTM D2240
Adhesion	Excellent	PTM&W
Water Absorption	< 0.4 %	ASTM D570
Compressive Strength	2156 psi	ASTM D695

## 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 ES6249 is 2 parts resin (Part A) to 1 part hardener (Part B) by weight or volume. Measure out 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, ES6249 must be used within 25 to 30 minutes for best surface wetting and adhesion. For filling pinhole porosity and shallow defects, ES6249 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 ES6249 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:** ES6249 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 sunlight 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:** ES6249 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 sandpaper. In some instances, it may not be possible, or desirable, to sand the cured surface of ES6249. 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 ES6249. When the patch has cured, the cling wrap can be peeled off, leaving a smooth, even surface ready to cover.

**CLEANUP and SAFETY:** ES6249 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. ES6249 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 many industrial materials, if the AEROPOXY products are used in a responsible manner, and cleaned off the skin as soon as possible, the chances of adverse reaction are minimal.

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