

PRODUCT OVERVIEW

EPSILON™ is a thixotropic epoxy coating that self thickens for brushing onto a variety of surfaces without sagging. Parts A and B mix together easily, and the mixture wets out uniformly. This product is not sensitive to moisture or humidity. **EPSILON™** cures at room temperature to an impact resistant plastic which exhibits good compressive and flexural strength.

EPSILON™ is color neutral, and cured material can be easily sanded, primed and painted. **EPSILON™** is suitable for use as a protective, impact resistant coating for EPS or polyurethane foam. It can also be applied to plaster, concrete, wood and fabrics. This product is not sensitive to moisture or humidity and **contains no VOC's**.

EPSILON™ Surface Coat Epoxy - Part A		
Material Properties	With 101 Hardener	With 102 Hardener (sold separately)
Mix Ratio By Weight	100A:20B	100A:25B
Mixed Viscosity - CPS. (ASTM D2393)	Variable	Variable
Specific Gravity - Mixed; g./c.c. (ASTM D1475)	1.16	1.14
Spec. Volume - Mixed; cu. in./lb. (ASTM D792)	23.9	24.3
Pot Life - Minutes (ASTM D2471)*	15	30
Thin Film Working Time - Minutes*	45	120
Thin Film Tacky Recoat Time - Minutes*	60	180
Thin Film Tack Free Time - Hours	2	5
Cure Time - Hours*	16	24
Color - Mixed	Beige	Beige
Shore D Hardness (ASTM D2240)**	75	75
* Dependant on mass		
** Value measured after 7 days at 73°F / 23°C		

PROCESSING RECOMMENDATIONS

Preparation – Avoid breathing fumes - use in a well ventilated area at minimum. NIOSH approved respirator is recommended. Wear safety glasses, long sleeves and rubber gloves to minimize skin contact. This material has a high exotherm (generates heat). Do not mix components in glass or foam containers.

Materials should be stored and used in a room temperature environment (73°F/23°C). Elevated temperatures will reduce Pot Life. **EPSILON™** Part A resin and Part B Hardener must be properly measured and thoroughly mixed to achieve full, high-strength, solid-cure properties. Mixing sticks should be flat and stiff with defined edges for scraping the sides and bottom of your mixing container. **Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.**

Applying a Release Agent – For releasing epoxy from non-porous surfaces such as resin, metal, glass etc., use Ease Release™ 200 or 205 (available from Smooth-On) to prevent adhesion.

Measuring and Dispensing – Stir or shake Part A and Part B thoroughly before dispensing. Accurate ratio measurements by weight are required for

EPSILON™ Coverage Rates	
Amount	Applied at 1/16" (1.6mm)
1 oz. / 28.3 grams	23.9 in ² (154.19 cm ²)
Trial Unit (2.8 lbs. / 1.27 kg)	7.5 ft ² (0.69 m ²)
Gallon Unit (11 lbs. / 5.08 kg)	30 ft ² (2.78 m ²)
5 Gallon Unit (54 lbs. / 24.4 kg)	148 ft ² (13.29 m ²)

the material to cure properly and develop full physical properties. Dispense proper proportions of parts A and B into clean plastic, metal or wax-free paper containers.

Mixing – Do not use foam or glass mixing containers. Be sure mixing utensils are clean and free of any potential contaminants such as dirt, dust or grease. Mix Parts A and B thoroughly for at least 3 minutes with a square edged mixing stick. Be aggressive and scrape sides and bottom of mixing container several times. Use the square edge of mixing stick to bring material off of the sides of container and blend. **If using a drill mixer**, follow with hand mixing as directed above to ensure thorough mixing. **NOTE:** Pot life can be extended by pouring mixture into a shallow pan, reducing its mass.

Important - Mixed **EPSILON™** Resin with EpoxAmite™ PART B Hardener is exothermic, meaning it generates heat. A concentrated mass of mixed epoxy in a confined area such as a mixing container can generate enough heat to melt a plastic cup, burn skin or ignite combustible materials if left to stand for its full Pot Life. If a batch of mixed epoxy begins to exotherm, move it to an open air environment.

Safety First!

The material safety data sheet (MSDS) for this or any Smooth-On product should be read before using and is available on request. All Smooth-On products are safe to use if directions are read and followed carefully.

EPSILON™ Resin PART A:

WARNING: IRRITANT TO EYES, SKIN & MUCOUS MEMBRANES.

EPSILON™ Resin is irritating to the eyes and skin. Avoid prolonged or repeated skin contact to prevent possible sensitization. Avoid breathing vapors and use only with adequate ventilation. Wear personal protective equipment.

First Aid: In case of eye contact, flush thoroughly with water for 15 minutes and get immediate medical attention. In case of skin contact, wipe clean with white vinegar and wash thoroughly with soap and water. If irritation persists, get medical attention. If swallowed, do not induce vomiting. Drink 1 - 2 glasses of water and get immediate medical attention. If vapors are inhaled or if breathing becomes difficult, remove person to fresh air. If symptoms persist, get medical attention.

Keep Out Of Reach Of Children.

EpoxAmite™ PART B Hardener:

WARNING: IRRITANT TO EYES, SKIN & MUCOUS MEMBRANES.

EpoxAmite™ Hardeners are corrosive materials and can cause severe eye and skin burns. They are sensitizers that may cause dermatitis from skin contact or vapor inhalation. Use these products only with adequate ventilation. Remove contaminated clothing and wash from skin with soap and water.

First Aid: In case of eye contact, flush thoroughly with water for 15 minutes and get immediate medical attention.

Keep Out Of Reach Of Children.

IMPORTANT: The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.

Adding Color - EPSILON™ Epoxy Surface Coat System can be colored with UVO™ or IGNITE™ colorants (from Smooth-On). Pre-mix colorant with Part A thoroughly and then add Part B.

Adding Fillers - A variety of dry fillers can be added. Pre-mix dry filler with Part A before adding Part B.

Important - Mixed EPSILON™ Resin with EpoxAmite™ PART B Hardener is exothermic, meaning it generates heat. A concentrated mass of mixed epoxy in a confined area such as a mixing container can generate enough heat to melt a plastic cup, burn skin or ignite combustible materials if left to stand for its full Pot Life. If a batch of mixed epoxy begins to exotherm, move it to an open air environment.

Extending Working Time – mixed material in a deep mixing cup or bucket will set up quickly due to concentration of the liquid mass. Pour mixture into a flat (shallow) metal cookie sheet or baking pan and dispense product from there. Working time will be extended.

Apply In Thin Layers - two thin layers of EPSILON™ are recommended for a smooth, uniform coating. Using chip brush or roller, apply 1st thin layer to surface and let epoxy partially cure until “tacky hard”. Apply 2nd thin layer. Allow both layers to fully cure. **Do not apply epoxy thicker than 1/8” (0.32 cm) per layer as this may cause sagging and result in an uneven cured coating.**

When coating areas of fine detail, using successive thin layers of EPSILON™ will allow a protective layer of material to be built up without obscuring the detail of the original surface.

Cure Time: Refer to the specified “Cure Times” in the “Material Properties” section on front of this Technical Bulletin. Fully cured material will be hard and unable to penetrate with a finger nail. Cured epoxy can now be dry sanded.

If machining or sanding, wear NIOSH approved mask to prevent inhalation of particles.

Curing - This product will cure at room temperature (73°F/23°C) and does not require heat.

Painting – EPSILON™ can be painted and/or primed and then painted with acrylic enamel paints. Let paint fully dry before putting part into service. For best results, lightly sand surface prior to painting.

Removing Epoxy – Uncured / Non-curing epoxy: Scrape as much material as possible from the surface using a scraper. Clean the residue with E-POX-EE KLEENER™ available from Smooth-On, lacquer thinner, acetone or alcohol. Follow safety warnings pertaining to solvents and provide adequate ventilation.



Call Us Anytime With Questions About Your Application

Toll-free: (800) 381-1733 Fax: (610) 252-6200

The new www.smooth-on.com is loaded with information about mold making, casting and more.