

Free Form™ AIR Fire Safe

Flame Rated Mix & Apply-By-Hand Epoxy Dough



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PRODUCT OVERVIEW

Free Form™ AIR Fire Safe is a lightweight epoxy putty that certifies to the highest flame rating available (E84, Class A). This is a low odor, low shrinkage putty that is unique, inexpensive and easy to use. Free Form™ AIR Fire Safe is mixed by hand with a 1A:1B by volume mix ratio. It offers a long working time and cures overnight at room temperature to a rigid epoxy that is very strong. It can be sanded, shaped and drilled. It will readily accept any paint. Free Form™ AIR Fire Safe can also be color pigmented with UVO™ or Ignite™ colorants.

Press Into a Mold - After mixing, Free Form™ AIR Fire Safe can be pressed into a mold to make a lightweight, detailed casting.

Apply to Vertical Surfaces - Free Form™ AIR Fire Safe will hold vertical surfaces and can be applied to almost any surface including polystyrene foam for rough sculpting. Free Form™ AIR Fire Safe is suitable for interior/exterior theming applications and general sculpting and is used to make hyper-realistic trees, vines, rocks, and other display elements.

Pot Life/Working Time - this material is mass sensitive. The more material you mix at one time, the less time you have to work with it.

Working tip - If mixing a large quantity, flatten putty with a rolling pin to reduce mass concentration and extend pot life.

- **Thickness; 1.5 inch (3.81 cm)** – pot life is 30 minutes, handling time is 2.5 hours, full cure in 24 hours.
- **Thickness; 3/8" (0.95 cm)** – pot life is 60 minutes, handling time is 4 hours, full cure in 24 hours.
- **Thickness; 1/8" (0.32 cm)** - pot life is 120 minutes; handling time is 8 hours, full cure in 24 hours.

TECHNICAL OVERVIEW

Mix Ratio: 1A:1B by volume

Mixed Viscosity: Dough (ASTM D-2393)

Specific Gravity, g/cc: 0.8 (ASTM D-1475)

Specific Volume, cu. in. /lb.: 34.6 (ASTM D-1475)

Color: Grey

Shore D Hardness: 73 (ASTM D-2240)

Heat Deflection Temp: 140°F/60°C (ASTM D-648)

* All values measured after 7 days at 73°F/23°C

** Depending on mass

PROCESSING RECOMMENDATIONS

PREPARATION...

Safety - Use in a well-ventilated area ("room size" ventilation). Generally, if you use any epoxy system on a regular basis, wearing a NIOSH approved respirator is advised. Wear safety glasses, long sleeves and rubber gloves to minimize skin contact. Wear nitrile or vinyl gloves only.

Materials should be stored and used at room temperature (73°F/23°C). This product has a limited shelf life and should be used as soon as possible. Mixing should be done in a well-ventilated area. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. 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 Sonite™ Wax (available from Smooth-On) to prevent adhesion.

This product is mixed by hand. **You must wear gloves when mixing this material**, wearing vinyl gloves reduces inhibition risk.

MIXING & MEASURING

Measuring - Free Form™ AIR Fire Safe putty comes as two parts. Dispense equal amounts (golf ball size, for example) of Part A and Part B. These products have a limited shelf life and should be used as soon as possible.

Mixing - Knead parts together aggressively to a uniform color and apply quickly to surface of tool or mold. Working tip; If mixing a large quantity, flatten putty with a rolling pin to reduce mass concentration and extend pot life.

APPLYING

Using Water as a Bonding Primer - Before applying Free Form™ AIR Fire Safe, spray a light mist of water over all surfaces. Do not allow water to pool.

Applying - Mixed Free Form™ AIR Fire Safe is a dough that can be applied up to 1.5" (3.81 cm) thickness. Mix only enough material to be used at one time. Free Form™ AIR Fire Safe will bond to itself.

Safety First!

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully.

Keep Out of Reach of Children

Be careful. Use only with adequate ventilation. Contact with skin and eyes may cause irritation. Flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with waterless hand cleaner followed by soap and water. 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.

Laminating - Free Form™ AIR Fire Safe can be used in conjunction with EpoxAcoat™ surface coat and EpoxAmite™ laminating resin to create a strong and lightweight composite tool or mold.

USE AS A SCULPTING MATERIAL & PAINTING

Use as a Sculpting Medium - Free Form™ AIR Fire Safe can be applied to wire mesh armatures to create rigid forms for sculpting. Wire mesh for sculpting is available at most art supply stores. Free Form™ AIR Fire Safe can be applied to polystyrene foam to create a hard, rough-sculptable and sandable surface. When applying to polystyrene foam, maximum thickness is ¾" (1.90 cm).

Smoothing Surface - Epoxy surface can be smoothed with water or isopropyl alcohol.

Painting - Cured Free Form™ AIR Fire Safe can be painted and / or primed and then painted with acrylic enamel paints. Let paint fully dry before putting part into service.

CURING & HEAT RESISTANCE

Cure Time - Refer to specified Cure Times in the Product Overview section at room temperature depending on mass. 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. Pot Life and Cure Time values are dependent on mass and mold configuration, as epoxies are mass-sensitive.**

Heat Resistance - Fully cured putty with a minimum thickness of ½" (1.27 cm) will resist temperatures up to 140°F/60°C.

Removing Uncured Free Form™ AIR Fire Safe Epoxy Putty - Remove as much uncured material from the surface as possible. Clean any residue with soap and water. **Optional** - Use E-POX-EE KLEENER™ available from Smooth-On.



Call Us Anytime With Questions About Your Application.

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

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