

# Habitat Cast N Coat™

Flame Rated Castable and Brushable Epoxy



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## PRODUCT OVERVIEW

Habitat Cast N Coat™ is a filled, two component (A+B) liquid epoxy that can be cast solid or thickened for brushing on / troweling on to vertical surfaces. Material cures to a rock-hard solid with negligible shrinkage.

Mix ratio is 1A:1B by volume. Working time is 85 minutes and material cures overnight (at room temperature). UVO™ or Ignite™ colorants can be added to liquid Habitat Cast N Coat™ during mixing to create a variety of color effects. Cured epoxy can be sanded and painted with acrylic paints.

Habitat Cast N Coat™ certifies to the highest flame rating available (ASTM E84, Class A), making this material ideal for public space fabrication applications. Also, it does not contain VOC's, phthalates or crystalline silica (a known carcinogen) and is safe for making elements used in proximity to animals/reptiles and aquatic life.

Epoxy bonds permanently to itself or a variety of surfaces and can be applied as a fire rated protective/decorative coating to EPS or rigid foam, wallboard, plaster, wood, PVC and more. Habitat Cast N Coat™ is also an excellent repair cement and bonds permanently to itself, PVC, Plexiglas™ (acrylic), wood, many metals, plastics and foams.

## TECHNICAL OVERVIEW

Mix Ratio: 1A:1B by weight or volume

Mixed Viscosity: 13,500 (ASTM D-2393)

Pot Life: 85 minutes \*\* (ASTM D-2471)

Cure Time: 16 hours \*\*

Specific Gravity, g/cc: 1.51 (ASTM D-1475)

Specific Volume, cu. in. /lb.: 18.35 (ASTM D-1475)

Color: Tan

Shore D Hardness: 85D (ASTM D-2240)

Heat Deflection Temp.: 131°F/55°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 Ease Release™ 200 or 205 (available from Smooth-On) to prevent adhesion.

**Pre-Mixing Material** - The fillers in this epoxy system will settle in the container over time. Before using, fillers need to be reconstituted by pre-mixing Part A thoroughly.

### MEASURING, MIXING & POURING

**Measuring** - Dispense equal amounts of Part A and Part B.

**Mixing** - 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, mix at low RPM and follow with hand mixing as directed above to ensure thorough mixing.

**Important - Do not vacuum material**

**Pouring** - If casting Habitat Cast N Coat™ into a rubber mold, pour mixture in a single spot at the lowest point of the mold. Let the mixture seek its level. A uniform flow will help minimize entrapped air. Recommended casting thickness maximum 4 in /10 cm. Castings that are ¼ in. thickness or less will cure more slowly.

## THICKENING

**Thickening Cast N Coat™ Using Folding Powder™** - Increase viscosity for vertical surface application by adding folding powder. For a trowelable consistency (for coating EPS foam, for example), start by adding 1 Part A, 1 Part B and 1 Part Folding Powder™

## 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.

and increase as needed. Using a Turbine Mixer, Mix A + B thoroughly and slowly sift in Folding Powder™ while still mechanically mixing. Apply to vertical surface using a disposable chip brush or trowel. Material sticks to itself, so adding layers is possible at any time. Material can be smoothed by applying alcohol or water to gloved finger tips and applying.

## CASTING THICKNESS & CURING

**Curing and Heat Resistance** - Habitat Cast N Coat™ will cure in 16 hours at room temperature. Elevated heat will cure epoxy faster. At an ambient temperature of 150°F/60°C, the material will cure in as little as 30 minutes. A heat gun may also be used, as long as the surface temperature of the Habitat does not exceed 212°F/100°C. Material cured at room temperature with a minimum thickness of ½" (1.27 cm) will resist temperatures up to 131°F/55°C.

## MACHINING, PAINTING & CLEAN UP

**Machining** - Cured castings are rigid and durable. They resist moisture, moderate heat, solvents, dilute acids and can be machined, primed/painted or bonded to other surfaces (any release agent must be removed). If machining cured Habitat Cast N Coat™ epoxy, wear dust mask or other apparatus to prevent inhalation of residual particles.

**Painting** - For outdoor display, cured Habitat Cast N Coat™ can be primed and then painted with acrylic enamel paints. Let paint fully dry before putting part into service.

**Removing Uncured Habitat Cast N Coat™** - 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.

Flame testing data and certification available upon request.



**Call Us Anytime With Questions About Your Application.**

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

[www.smooth-on.com](http://www.smooth-on.com) is loaded with information about mold making, casting and more.