

PRODUCT OVERVIEW

StyroCoat™ Plastic is a flame rated (E-84) sprayable polyurethane plastic formulated to economically coat a variety of surfaces. Dispensed through Smooth-On's EZ~Spray™, Jr. cartridge system, the plastic cures in about 2 seconds and can be applied to vertical surfaces without running off. An advantage of the system is that large areas can be covered in a short period of time. Cured plastic is lightweight, flame, impact, and water resistant. It can be sanded for priming and painting. Plastic can also be sprayed into a rubber mold to make fast, impact resistant

castings (application of a release agent may be necessary before spraying into the mold). StyroCoat™ Plastic is used for theme design / fabrication applications, making movie set environments, making surfaces water resistant and other industrial applications.

TECHNICAL OVERVIEW

Mix Ratio: 1A:1B by volume

Mixed Viscosity, cps: Variable (ASTM D-2393)

Specific Gravity, g/cc: 1.12 (ASTM D-1475)

Specific Volume, cu. in./lb: 24.7 (ASTM D-1475)

Pot Life: 2 seconds @ 73°F/23°C (ASTM D-2471)

Cure time: 60 minutes @ 73°F/23°C ** (ASTM D-2471)

Color: Off-White

Shore D Hardness: 80 (ASTM D-2240)

Ultimate Tensile, psi: 3,170 (ASTM D-638)

Tensile Modulus, psi: 131,000 (ASTM D-638)

Elongation @ Break: 20% (ASTM D-638)

Flexural Strength psi: 6,400 (ASTM D-790)

Flexural Modulus, psi: 205,000 (ASTM D-790)

Compressive Strength, psi: 5,000 (ASTM D-695)

Heat Deflection Temp: 130°F/55°C (ASTM D-648)

Compressive Modulus, psi: 47,600 (ASTM D-695)

Shrinkage, in./in: 0.015 (ASTM D-2566)

Flame Spread: 60 Smoke Density: 400 at 1/4" (ASTM E-84)

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

** Depending on Mass

PROCESSING RECOMMENDATIONS

PREPARATION...

Safety - Store and use at room temperature (73°F/23°C). These products have a limited shelf life and should be used as soon as possible. Environmental humidity should be as low as possible. Good room size ventilation is essential. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. Spraying should be done in a well-ventilated area.

Breathing protection: Everyone in the spray area should wear an independent air supplied hood or NIOSH approved breathing mask.

Do Not Attempt To Spray Rubber Or Plastic Without First Reading The EZ~Spray™ Junior Manual!

Applying A Release Agent - A release agent is necessary to facilitate demolding when spraying into a rubber mold to create castings. Use a release agent made specifically for mold making (Universal™ Mold Release) available from Smooth-On or your Smooth-On distributor). A liberal coat of release agent should be applied onto all surfaces that will contact the plastic.

IMPORTANT: To ensure thorough coverage, lightly brush the release agent with a soft brush over all surfaces. Follow with a light mist coating and let the release agent dry for 30 minutes.

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.

Remember, StyroCoat™ Plastic sets up immediately.

SPRAYING...

After material cartridge is loaded & prepared depress trigger and begin spraying.

IMPORTANT: Shelf life of product is reduced after opening. Remaining product should be used as soon as possible. Immediately replacing the lids on both containers after dispensing product will help prolong the shelf life of the unused product. **XTEND-IT® Dry Gas Blanket** (available from Smooth-On) will significantly prolong the shelf life of unused liquid product.

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. **Keep Out of Reach Of Children.**

Be Careful. Part A (Yellow Label) is a modified aliphatic diisocyanate. Vapors, which can be significant if heated or sprayed, cause lung damage and sensitization. Use only with adequate ventilation. Contact with skin and eyes may cause severe 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. Refer to MSDS.

Part B (Blue Label) is irritating to the eyes and skin. Avoid prolonged or repeated skin contact. If contaminated, flush eyes with water for 15 minutes and get immediate medical attention. Remove from skin with soap and water. When mixing with Part A, follow precautions for handling isocyanates.

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 a copyright or patent. User shall determine suitability of the product for the intended application and assume all associated risks and liability.

Spraying - Spray on a thin first coat, moving quickly. Spray undercuts and recesses first. Wait two minutes between first and second coats. Heat from the first coat will speed the cure of the others. Spray bottom edges with many thin coats to avoid drips and voids. Work from bottom to top. Increase the pressure for heavier coats. Consult EZ~Spray™ Jr. Instruction Manual & Video for more tips on being successful with this system.

COVERAGE, CURING & PERFORMANCE...

Rate of Coverage - Each cartridge of StyroCoat™ contains 3.75 lb/1.7 kg of material. Assuming a thickness of 0.1 inches (0.25 cm), one cartridge of StyroCoat™ will cover approximately 6.43 sq. ft. (0.6 square meters).

Curing - StyroCoat™ Plastic will harden immediately and can be handled in about one hour depending on mass and configuration.

Performance - Cured plastic is rigid and durable. It resists moisture, moderate heat, solvents, dilute acids and can be sanded, machined; primed/painted or bonded to other surfaces (any release agent must be removed). If sanding or machining, wear dust mask or other apparatus to prevent inhalation of residual particles. Plastic can be displayed outdoors after priming and painting. Unpainted castings will yellow when exposed to ultra-violet light.

Because no two applications are quite the same, a small test application to determine suitability is recommended if performance of this material is in question.



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.

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