



SMOOTH-CAST™ 325, 326 & 327

Colormatch™ Series Ultra-Low Viscosity Liquid Plastics

PRODUCT OVERVIEW

Smooth-Cast™ 325, 326 & 327 ColorMatch™ are new fast-cast resins that were developed specifically for adding color pigments and fillers to achieve true color representation or filler effect. The ColorMatch™ Series is formulated “color neutral”. Small amounts of pigment will yield accurate, vivid colors from cured castings (use of Smooth-On pigments is highly recommended). The ColorMatch™ Series has a very low viscosity and requires no degassing. Demold times range from about 10 minutes to 2-4 hours (depending on product, mass and mold configuration). SC 325, 326 & 327 offer the convenience of a 1A: 1B mix ratio by volume.

SC 325, 326 & 327 also readily accept fillers (such as URE-FIL 3 from Smooth-On). Because of its neutral color, SC 325 is ideal for creating marble and wood grain casting effects, or duplicating the look of real metal by adding bronze, brass or other metal powder (see Smooth-On technical bulletin for metal cold casting). Applications for the ColorMatch™ Series plastics include making pigmented prototype models or figures, special effect props, reproducing small to medium size sculptures, decorative jewelry, etc.

TECHNICAL OVERVIEW

Key Values:	~Mixing Ratio: One to One by volume.	~Color: Clear Amber	~Durometer: Shore 72D
	Pot Life	Demold Time (depending on mass)*	Shrinkage
Smooth-Cast 325	2.5 minutes	7-10 minutes	.01 in./in.
Smooth-Cast 326	7-9 minutes	60 minutes	.006 in./in.
Smooth-Cast 327	10-20 minutes	2-4 hours	.0035 in./in.

*Castings made with **Smooth-Cast™ ColorMatch™** liquid plastics do not “snap cure” and will remain in a “rubbery” phase and stay semi-rigid before turning into a rigid solid.

COMPONENTS	COLOR	VISCOSITY	S.G. g/cm ³	S.V. cu. in./lb.
Mixed Part A + B	Clear Amber	100 cps	1.07	27.7
	Modulus: 61,600 PSI	Ultimate Tensile Strength: 3,170 PSI		

Applying A Release Agent

Preparation . . . All liquid urethanes are **moisture sensitive** and will absorb atmospheric moisture. Mixing tools and containers should be clean and made of metal, glass or plastic. Materials should be stored and used in a warm environment (72° F / 33° C). Mixing should be done in a well-ventilated area. Wearing eye protection, latex gloves and long sleeve garments to minimize skin contact is strongly recommended. **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 . . . A release agent is necessary to facilitate demolding when casting into or over most surfaces. Use a release agent made specifically for mold making (Universal Mold Release or Ease Release 200 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. Most silicone rubber molds usually do not require a release agent unless casting silicone into the mold. Applying a release agent (such as Mann Ease Release 200), however, will prolong the life of the mold.

Each Time . . . Shake or stir both Part A & Part B before using.

Pre-Mix Pigment Or Fillers With Part B . . . for consistent results, pigment or fillers should be added by weight each time. Some "test" castings may have to be made until desired affect is achieved. Add desired amount of pigment or filler to ColorMatch™ Part B and blend thoroughly to a uniform consistency before adding Part A.

How Much Pigment or Filler? Pigment Example: Generally, 0.5% - 1% Smooth-On pigment added by weight of Part B will yield rich, vibrant color. For translucent effect, add 0.1% pigment. **Metal Cold Casting:** Ask for our Technical Bulletin On Metal Cold Casting. Because end-user requirements vary for desired finished effect, we can not offer all pigment or filler loading percentage possibilities. Again, "test" castings may have to be made until desired effect is achieved.

Mixing

Mixing . . . Materials should be stored and used in a warm environment (72° F / 23° C). **Shake or stir Part A & Part B before using.** Add required amount of pigment or filler to Part B and mix thoroughly. Add Part A (equivalent to amount of Part B) and **mix thoroughly.** Stir slowly and deliberately making sure that you scrape the sides and bottom of the mixing container several times. Be careful not to splash low viscosity material out of container. **SC325 sets up quickly.** Do not delay between mixing and pouring.

IMPORTANT: Shelf life of product is drastically 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 urethane products.

Pouring

Curing

Performance

Pouring . . . For best results, pour your mixture in a single spot at the lowest point of the containment field and let the mixture seek its level. This will help minimize air entrapment.

Curing . . . SC 325 will cure in 7-10 minutes*, SC 326 in 30 minutes* and SC 327 in 2-4 hours* depending on mass and mold configuration. Non-hazardous fumes, which may be visible as this product starts to "gel" and cure, will dissipate with adequate (room size) ventilation. Post curing (heating your casting to 150°F/65°C) for 4 – 6 hours increases physical properties and performance. Castings made with Smooth-Cast™ ColorMatch™ liquid plastics do not "snap cure" and will remain semi-rigid longer than other Smooth-Cast™ resins.

Performance . . . 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 material, wear dust mask or other apparatus to prevent inhalation of residual particles. Castings can be displayed outdoors after priming and painting. Unpainted castings will yellow over time - more quickly 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.

Safety First!

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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.

Be careful. Part A (Yellow Label) contains methylene diphenyl diisocyanate. Vapors, which can be significant if prepolymer is heated or sprayed, may 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 get immediate medical attention. Remove from skin with soap and water. 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. If machining cured SC325, wear dust mask or other apparatus to prevent inhalation of residual particles.

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 intended applications and assumes all associated risks and liability.

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