



C - 1515® / C - 1520®

Semi-Rigid Urethane Casting Resins

PRODUCT OVERVIEW

C-1515® is a fast setting two-component urethane that cures in minutes to a semi-rigid plastic. It has a pot life of 3 minutes and demold of 20 minutes. With a Shore A value of 95, C-1515® is used for a variety of industrial applications that call for fast mold making, model duplication or high impact resistance. Castings (fully cured) are tough, durable and exhibit good heat and chemical resistance. **Applications for C-1515® & C-1520®** include producing fast setting molds, making quick mold impressions, fast model duplication for prototype and design projects, mechanical parts, high impact tooling, holding fixtures, durable miniatures and special effects.

C - 1520® is essentially the same material, but offers a longer pot life (10 minutes) and demold (45 minutes).

TECHNICAL OVERVIEW

Key Values: ~**Mixing Ratio:** 100 Parts A to 120 Parts B by weight. ~**Color:** Black ~**Shore A Hardness:** 95
~**Pot Life:** C-1515® - 3 min. \ C-1520® - 10 min. ~**Demold Time:** C-1515® - 20 min. \ C-1520® - 45 min.

Description: C-1515® (and C-1520®) consists of two liquid components, Part A (Yellow Label) and Part B (Blue Label). When combined in a mixing ratio of 100 Parts A to 120 Parts B by weight, it cures to a semi-rigid elastomer.

<u>PROPERTIES*</u>	<u>COLOR</u>	<u>VISCOSITY</u>	<u>S.G. g/cm³</u>	<u>MIX RATIO</u>
PART A	Clear Amber	520 cps	1.15	100pbw
PART B	Black	1,200 cps	1.14	120 pbw
Mixed	Black	800 cps	1.15	-

Ultimate Tensile Strength 1,800 PSI. Tear Strength . . . (Die "C") 200 pli Spec. Vol: 24 cu. in./lb.
Shore Hardness 95 A Elongation At Break 125% Shrinkage C-1515®/ .005 in/in
C-1520®/ .0035 in/in

*Ultimate properties reached overnight.

MIXING C - 1515® or C - 1520®

Preparation . . . Materials should be stored and used in a warm environment (72° F / 22° C). These products have a limited shelf life and should be used as soon as possible. Your mixing tools and containers should be clean and made of metal, glass or plastic. To minimize the introduction of harmful moisture to your mix or unused product, do not use wooden utensils or paper containers. As with most two-component urethane products, 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 . . . If you are unsure about surface compatibility, a trial casting on a surface finish similar to the final mold or model should be made to avoid damage to the working surface. Polyurethane, latex or metal molds should be dry and require a coat of suitable release agent. Universal® Mold Release (available from Smooth-On) is ideal for this purpose. A liberal coat of release agent should be applied onto all surfaces that will contact the plastic. 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.

Before Mixing . . . Part B (blue label) must be stirred well before use.

Mixing . . . The components (Parts A and B) should be at room temperature (77 F / 25 C). Using an accurate scale, Pour 100 Parts A (yellow label) as measured by weight into a container. Add 120 Parts B (blue label) and mix thoroughly. Make sure that you scrape the bottom and sides of your container several times. **Remember, product sets up quickly. The higher the mass concentration, the faster the material gels and cures. 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. **XTEND-IT® Dry Gas Blanket** (available from Smooth-On) will significantly prolong the shelf life (up to 4 times longer) of unused liquid urethane products.

POURING C - 1515® and C - 1520®

Pouring . . . Warning: Fumes, which may be visible as this product starts to “gel” and cure, will dissipate with adequate ventilation. Only use this product with room size ventilation and do not inhale/breathe fumes. Castings will be extremely hot immediately following cure and may burn the skin. Let cool to room temperature before handling. For best results, pour your mixture in a single spot at the lowest point of the mold or container and let the mixture seek its level. If encapsulating an object, do not pour the mixture directly over the object. Let the mixture seek its own level around and over the object. This will help minimize air entrapment.

Performance . . . Cured castings of C-1515® and C-1520® are semi-rigid, durable and exhibit negligible shrinkage. They also resist moisture, moderate heat, solvents and dilute acids. Mold release must be removed prior to painting or bonding the cured piece. 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 for this or any Smooth-On product should be read before using and is available upon request. All Smooth-On products are safe to use if directions are read and followed carefully.

Be Careful . . . Part A (Yellow Label) contains methylene diisocyanate. Vapors, which can be significant if prepolymer is 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 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 seek 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 patent. User shall determine the suitability of the product for his/her intended application and assume all risk and liability whatsoever in connection therewith.

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Website: www.smooth-on.com*

Office Hours and Technical Assistance: 8:00 a.m. to 5:00 p.m. eastern standard time.

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SMOOTH-ON offers a complete line of **LIQUID RUBBER COMPOUNDS** that are ideal for literally **hundreds** of industrial and art-related applications including:

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Prototype Molds
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SMOOTH-ON also offers a complete line of **LIQUID PLASTIC COMPOUNDS** that are perfect for:

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