

Ecoflex® 00-35

Super-Soft, Addition Cure Silicone Rubber



**Certified
Skin Safe!**



www.smooth-on.com

PRODUCT OVERVIEW

Ecoflex® 00-35 is a soft, fast cure platinum-catalyzed silicone that is versatile and easy to use. Parts A and B are mixed 1:1 by weight or volume, pot life is about 2.5 minutes and rubber cures in about 5 minutes at room temperature with negligible shrinkage. Low viscosity ensures easy mixing and pouring. Rubber cures without a “tacky” surface, is very soft, very strong and very “stretchy”, stretching many times its original size. **Ecoflex® 00-35** is off-white translucent and can be color pigmented using Silc Pig® silicone color pigments.

Certified Skin Safe - Material is skin safe and certified by an independent laboratory to OECD TG 439. Liquid **Ecoflex® 00-35 will cure against the skin** and can be used for **life casting** applications to make rubber molds that cure quickly and are good for casting wax, resins, etc. **Ecoflex® 00-35** can also be used for a variety of skin safe applications including making fast skin safe appliances for special effects and cosplay, cushioning for orthopedic and orthotic devices worn on the body and much more. **Ecoflex® 00-35** can also be used to make fast cure rubber molds with high elongation for casting a variety of materials.

PROCESSING RECOMMENDATIONS

Safety – Use in a properly ventilated area (“room size” ventilation). Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. Wear vinyl gloves only. Latex gloves will inhibit the cure of the rubber.

Store and use material at room temperature (73°F/23°C). Warmer temperatures will drastically reduce working time and cure time. Storing material at warmer temperatures will also reduce the usable shelf life of unused material. These products have a limited shelf life and should be used as soon as possible.

TECHNICAL OVERVIEW

Mix Ratio: 1A : 1B by volume

Mixed Viscosity, cps: 3,500 (ASTM D-2393)

Specific Gravity, g/cc: 1.07 (ASTM D-1475)

Specific Volume, cu. in. /lb.: 26.0 (ASTM D-1475)

Pot Life: 2.5 minutes (73° F / 23°C) (ASTM D-2471)

Cure time: 5 minutes (73° F / 23°C)

Color: Off-White Translucent

Shore A Hardness: 00-35 (ASTM D-2240)

Tensile Strength, psi: 200 (ASTM D-412)

100% Modulus, psi: 10 (ASTM D-412)

Elongation @ Break: 900% (ASTM D-412)

Die B Tear Strength, pli: 38 (ASTM D-624)

Shrinkage, in./in.: < .001 (ASTM D-2566)

Useful Temperature Range:
-65° F to 450° F (-19° C to 232° C)

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

Cure Inhibition – Addition-cure silicone rubber may be inhibited by certain contaminants in or on the pattern to be molded resulting in tackiness at the pattern interface or a total lack of cure throughout the mold. Latex, tin-cure silicone, sulfur clays, certain wood surfaces, newly cast polyester, epoxy or urethane rubber may cause inhibition. If compatibility between the rubber and the surface is a concern, a small-scale test is recommended. Apply a small amount of rubber onto a non-critical area of the pattern. Inhibition has occurred if the rubber is gummy or uncured after the recommended cure time has passed.

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.

To prevent inhibition, one or more coatings of a clear acrylic lacquer applied to the model surface is usually effective. Allow any sealer to thoroughly dry before applying rubber. Note: Even with a sealer, platinum silicones will not work with modeling clays containing heavy amounts of sulfur. Do a small scale test for compatibility before using on your project.

Applying A Release Agent - Although not usually necessary, a release agent will make demolding easier when pouring into or over most surfaces. Ease Release® 200 is a proven release agent for use with silicone rubber. Mann Ease Release® products are available from Smooth-On or your Smooth-On distributor.

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

If Applying To The Skin - Body Double® Release Cream (available from Smooth-On) is a non-toxic skin conditioner that will aid in releasing Ecoflex® 00-35 mold rubber from skin surfaces with or without hair. It washes off with soap and water. It is highly concentrated, so a little goes a long way. To use, wash intended body section with soap and water and dry thoroughly. Liberally apply Body Double® Release Cream to all skin surfaces (bare and hair covered) that will contact mold rubber.

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.

Take special care to aggressively massage and work the cream into and over body hair. Body hair not thoroughly coated with release cream will become encapsulated and stuck in rubber which will be difficult & painful to remove.

If there is any question about the effectiveness of a sealer/release agent combination, a small-scale test should be made on an identical surface for trial.

MEASURING & MIXING...

Before you begin, pre-mix Part B thoroughly. After dispensing required amounts of Parts A and B into mixing container (1A:1B by volume or weight), mix thoroughly for 90 seconds making sure that you scrape the sides and bottom of the mixing container several times. This material sets up quickly – do not delay between mixing and pouring

POURING & CURING...

For best results, pour your mixture in a single spot at the lowest point of the containment field. If making a mold, let the rubber seek its level up and over the model. **A uniform flow will help minimize entrapped air.** The liquid rubber should level off at least 1/2" (1.3 cm) over the highest point of the model surface.

Curing / Post Curing - Allow rubber to cure as prescribed at room temperature (73°F/23°C) before demolding. Do not cure rubber where temperature is less than 65°F/18°C. **Optional:** Post curing the mold will aid in quickly attaining maximum physical and performance properties. After curing at room temperature, expose the rubber to 176°F/80°C for 2 hours and 212°F/100°C for one hour. Allow mold to cool to room temperature before using. **Important;** Rubber will yellow over time naturally. Heating the rubber will cause the rubber to yellow more quickly.

Thinning Ecoflex® 00-35 - Smooth-On's Silicone Thinner® will lower the viscosity of Ecoflex® 00-35 for easier pouring and vacuum degassing. A **disadvantage** is that ultimate tear and tensile are reduced in proportion to the amount of Silicone Thinner® added. **It is not recommended to exceed 10% by weight of total system (A+B).** See the Silicone Thinner® technical bulletin (available from Smooth-On or your Smooth-On distributor) for full details.

Thickening Ecoflex® 00-35 - THI-VEX® is made especially for thickening Smooth-On's silicones for vertical surface application (making brush-on molds). Different viscosities can be attained by varying the amount of THI-VEX®. See the **THI-VEX® technical bulletin** (available from Smooth-On or your Smooth-On distributor) for full details.



Call Us Anytime With Questions About Your Application.

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

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