

# Dragon Skin<sup>®</sup> 10 NV

## Addition Cure Silicone Rubber Compound



www.smooth-on.com

### PRODUCT OVERVIEW

Dragon Skin<sup>®</sup> 10 NV is a low viscosity, high performance platinum cure silicone rubber that is easy to use and versatile. Mix ratio is 1A:1B by weight or volume, pot life is 15 minutes and cure time is 75 minutes at room temperature. Rubber cures with negligible shrinkage to a Shore 10A. Vacuum degassing is not necessary. Color is water white translucent.

Dragon Skin<sup>®</sup> 10 NV is suitable for making molds of any configuration for casting plasters, wax, low-melt temperature metal alloys, resins and other platinum silicones (release agent required).

Dragon Skin<sup>®</sup> 10 NV is compatible with other Dragon Skin<sup>®</sup> rubbers and is also suitable for special effects applications. Color can be added with Silc Pig<sup>®</sup> or Ignite<sup>®</sup> color pigments. This rubber can be thickened with Thi-Vex<sup>®</sup> thickening agent or softened with SLACKER<sup>®</sup> additive.

### 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 & Use 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.

**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, sulfur clays, certain wood surfaces, newly cast polyester, epoxy, tin cure silicone rubber 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.

**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 casting into or over most surfaces. Ease Release<sup>®</sup> 200 is a proven release agent for making molds with silicone rubber. Mann Ease Release<sup>®</sup> 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 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.

**Mixing** - Materials should be stored and used in a warm environment (73° F / 23° C). This product has a limited shelf life and should be used as soon as possible. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk.

Before you begin, pre-mix Part B (base) thoroughly. After dispensing required amounts of Parts A and B into mixing container (1A:1B by volume or weight), **mix thoroughly for 3 minutes** making sure that you **scrape the sides and bottom of the mixing container several times.**

### TECHNICAL OVERVIEW

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

Mixed Viscosity, cps: 6,000 (ASTM D-2393)

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

Specific Volume, cu. in. /lb.: 25.8 (ASTM D-1475)

Pot Life: 15 minutes (73° F / 23°C) (ASTM D-2471)

Cure time: 75 minutes (73° F / 23°C)

Color: Water White Translucent

Shore A Hardness: 10 (ASTM D-2240)

Tensile Strength, psi: 400 (ASTM D-412)

100% Modulus, psi: 27 (ASTM D-412)

Elongation @ Break: 663% (ASTM D-412)

Die B Tear Strength, pli: 90 (ASTM D-624)

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

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

## **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.

### **Be careful**

Use only with adequate ventilation. Contact with skin and eyes may cause irritation. Flush eyes with soap and 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.

**Adding Color** - You can color the rubber using Silc Pig® or Ignite® color pigments available from Smooth-On. Mix color thoroughly before vacuum degassing.

**Pouring** - For best results, pour your mixture in a single spot at the lowest point of the containment field. 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** - Allow rubber to cure for 75 minutes at room temperature (73°F / 23°C) before demolding. Time to demold can be reduced with mild heat. Full physical properties are attained after 24 hours cure at room temperature. Do not cure rubber where temperature is less than 65°F / 18°C. Allow mold to cool to room temperature before using.

**Post Curing** - Post curing the mold will aid in quickly attaining maximum physical and performance properties. After curing at room temperature, expose the rubber to 80°C for 2 hours and 100°C for one hour. Allow mold to cool to room temperature before using.

**Using The Mold** - When first cast, silicone rubber molds exhibit natural release characteristics. Depending on what is being cast into the mold, mold lubricity may be depleted over time and parts will begin to stick. No release agent is necessary when casting wax or gypsum. Applying a release agent such as Ease Release® 200 (available from Smooth-On) prior to casting polyurethane, polyester and epoxy resins is recommended to prevent mold degradation.

**Thickening With Thi-Vex® Thickening Agent** - A very small amount of Thi-Vex® will thicken the rubber, making it brushable for vertical surface application.



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

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

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