



# TASK<sup>™</sup> 12

Impact Resistant Tooling Resin  
(formerly Formula 73-187)

## PRODUCT OVERVIEW

TASK 12 is part of the TASK series of high performance casting resins. It is a new semi-rigid urethane resin that offers exceptional handling strength and impact resistance. Castings are tough, durable and UV resistant. TASK 12 can be color pigmented or filled and is used for a variety of industrial applications including making prototype models, high impact parts and tools, furniture, etc. **CAUTION: NOT FOR HOME USE. THIS PRODUCT IS FOR INDUSTRIAL USE ONLY.** Proper ventilation, A NIOSH Approved Respirator and Protective Clothing are required to minimize the risk of inhalation and dermal sensitization. If breathing is affected or a dermal rash develops, immediately cease using this product and seek medical attention. Read MSDS before using.

## TECHNICAL OVERVIEW

**Key Values:** ~Mixing Ratio: 100A to 44B by weight ~Ultimate Shore Hardness: 60D  
~Pot Life: 20 minutes. ~Demold Time: 16 Hours ~Color: Opaque Amber

Properties	Viscosity	G/CC	Cu. In./Lb.	Shrinkage
A+B Mixed	2400 cps	1.08	26.0	.0003 in./in

Tensile Strength: 2,700 psi    Tear Strength, Die C: 545 pli    Elongation at Break: 320    100% Modulus: 1530 psi

### Preparation                      Applying A Release Agent                      Measuring

**Preparation . . .** Materials should be stored and used in a warm environment (72° F / 23° C). All liquid urethanes are **moisture sensitive** and will absorb atmospheric moisture. Mixing tools and containers should be clean, dry and made of metal or plastic. Mixing should be done in a well-ventilated area. Wearing latex gloves and long sleeve garments will help minimize skin contact. (Refer to safety information on reverse of this technical bulletin.)

**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 Mann’s Ease Release 200). 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. Silicone rubber molds (Mold Max<sup>™</sup> Series) usually do not require a release agent. Applying a release agent however, will prolong the life of the mold.

**Mixing . . . Part B (blue label) must be stirred well before use to re-disperse ingredients that have settled.** Using an accurate gram scale, mix product 100 Parts A to 44 Parts B by weight. Mix thoroughly for 90 seconds. Stir slowly and deliberately making sure that you scrape the sides and bottom of the mixing container several times.

**Vacuum de-gas material prior to pouring** – subject mixture to 29 hg. mercury in a suitable in a suitable vacuum chamber for 4 – 5 minutes or until mixture rises, breaks and falls. Allow for 3 to 5 times volume expansion in mixing container.

### Pouring    Pressure Casting

**Pouring . . .** If casting into a rubber mold, pour mixture continuously in a single spot at the lowest point of the mold.

**Pressure Cast - For Best Results . . .** Best results are obtained using a pressure casting technique. After pouring material into mold, the entire casting assembly (mold, dam structure, etc.) is placed in a pressure chamber and subjected to 60 PSI (4.2 kg/cm<sup>2</sup>) air pressure for at least one hour. Vacuum degassing material is not necessary if pressure casting.

## Curing

## Performance

**Curing** . . . material will cure in 16 hours at room temperature depending on mass and mold configuration.

**Post Curing** - Castings will cure faster and achieve maximum physical properties and higher heat resistance if post cured. After room temperature cure, expose casting to (150°F / 65°C) for 4 – 8 hours.

**Performance** . . . Cured castings are semi-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). 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!**

*The Material Safety Data Sheet (MSDS) for this or anyother product should be read prior to use and is available at [www.SCULPT.com](http://www.SCULPT.com). All Smooth-On products are safe to use if directions are read and followed carefully.*

**Be careful.** Part A 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 is irritating to the eyes and skin. Avoid prolonged or repeated skin contact. Remove from skin with soap and water. If contaminated, flush eyes with water for 15 minutes and seek immediate medical attention. Use only with adequate ventilation

**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 therein.

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

Phone: (212) 367-7561

Fax: (212) 243-6374

Visit Us At Our Website: [www.SCULPT.com](http://www.SCULPT.com)