**PRODUCT OVERVIEW**

The Smooth-Cast® Semi-Rigid line of low-cost semi-rigid urethane casting resins cure quickly to semi-rigid plastics that offer exceptional strength and impact resistance. **New Formulations – New Look!** Smooth-Cast 45D, 60D and 61D are newly reformulated with a translucent white appearance and improved physical properties. All Smooth-Cast semi-rigids are now mercury free and phthalate free. These plastics are easy-to-use (mix ratio is 1A:1B by volume) and have low viscosities for minimal bubble entrapment. Vibrant colors are possible by adding SO-Strong® color tints or Ignite® color pigments.

Shore Hardness Available:  
- **45D**: Softer, Semi-Rigid  
- **57D, 60D & 61D**: Some Flexibility  
- **65D & 66D**: More Rigid  
- **70D (for comparison)**: Rigid, Not Flexible

These semi-rigid plastics are good for making impact resistance prototypes, abrasion resistant parts, climbing holds, foundry patterns, roller facings, vibration pads, etc.

**NOTE:** Smooth-Cast® 57D and Smooth-Cast® 65D are also suitable for rotational casting applications. Do not use other Smooth-Cast® semi-rigid plastics for roto casting.

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**TECHNICAL OVERVIEW**

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</thead>
<tbody>
<tr>
<td>Smooth-Cast® 45D</td>
<td>1A:1B</td>
<td>100A:93B</td>
<td>5 min</td>
<td>30 min</td>
<td>45D</td>
<td>250 cps</td>
<td>1.10</td>
<td>25.2</td>
<td>1,560 psi</td>
<td>100%</td>
<td>0.007</td>
<td>Translucent White</td>
</tr>
<tr>
<td>Smooth-Cast® 57D</td>
<td>1A:1B</td>
<td>100A:93B</td>
<td>3 min</td>
<td>30 min</td>
<td>57D</td>
<td>300 cps</td>
<td>1.05</td>
<td>26.4</td>
<td>2,420 psi</td>
<td>100%</td>
<td>0.012</td>
<td>Translucent White</td>
</tr>
<tr>
<td>Smooth-Cast® 60D</td>
<td>1A:1B</td>
<td>100A:93B</td>
<td>5 min</td>
<td>30 min</td>
<td>60D</td>
<td>430 cps</td>
<td>1.05</td>
<td>26.4</td>
<td>2,420 psi</td>
<td>100%</td>
<td>0.012</td>
<td>Translucent White</td>
</tr>
<tr>
<td>Smooth-Cast® 61D</td>
<td>1A:1B</td>
<td>100A:93B</td>
<td>7 min</td>
<td>60 min</td>
<td>61D</td>
<td>430 cps</td>
<td>1.05</td>
<td>26.4</td>
<td>2,420 psi</td>
<td>100%</td>
<td>0.012</td>
<td>Translucent White</td>
</tr>
<tr>
<td>Smooth-Cast® 65D</td>
<td>1A:1B</td>
<td>100A:93B</td>
<td>2.5 min</td>
<td>10-15 min</td>
<td>65D</td>
<td>120 cps</td>
<td>1.05</td>
<td>26.4</td>
<td>2,400 psi</td>
<td>20%</td>
<td>0.01</td>
<td>White</td>
</tr>
<tr>
<td>Smooth-Cast® 66D</td>
<td>1A:1B</td>
<td>100A:93B</td>
<td>7 min</td>
<td>60 min</td>
<td>66D</td>
<td>120 cps</td>
<td>1.05</td>
<td>26.4</td>
<td>2,400 psi</td>
<td>20%</td>
<td>0.01</td>
<td>Grey</td>
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</tbody>
</table>

*All values measured after 7 days at 73°F/23°C  
** Depending on Mass

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**PROCESSING RECOMMENDATIONS**

**PREPARATION... Safety** - Materials should be stored and used in a warm environment (73°F/23°C). These products have a limited shelf life and should be used as soon as possible. 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.

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** - 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 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, apply release and brush with a soft brush over all surfaces. Follow with a light mist coating and let the release agent dry for 30 minutes. Smooth-On silicone rubber molds usually do not require a release agent unless casting silicone into the mold. Applying a release agent will prolong the life of the mold.
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.

Keep Out of Reach Of Children.

Be Careful - Part A (Yellow Label) contains methylene diphenyl diisocyanate. Vapors, which can be significant if 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 castings, 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 the intended application and assume all associated risks and liability.

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.

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.