



# TCC-6060A/B (60 Shore D)

POLYURETHANE CASTING  
SYSTEM

## PRODUCT BULLETIN



[www.CASSpolymers.com](http://www.CASSpolymers.com)  
31200 Stephenson Hwy

800.344.7776  
Madison Heights MI 48071

[TCC@CASSpolymers.com](mailto:TCC@CASSpolymers.com)  
Ph 248.588.2270 Fax 248.588.5909

### DESCRIPTION

**TCC-6060A/B** is a two-component, room temperature cure, 60 Shore D hardness urethane elastomer. This shorter work life casting system offers outstanding performance properties including high impact strength, low shrinkage and easy processing. In many applications parts can be demolded several hours after casting. In complex parts or very thin sections, castings may require 9 – 16 hours before demolding; and in very demanding applications, an additional cure of 3 or 4 days at room temperature before use. The ultimate properties of this material are reached after 1 – 3 weeks at room temperature or by being post cured for 16 hours at 140°F (60°C).

**Typical Applications Include: Long Lasting Molds • Industrial Wheels • Drop Hammer Faces • Washers • Gaskets • Foundry Patterns • Core Box Linings**

### HANDLING CHARACTERISTICS @ 25°C/77°F

|   |   |                 |
|---|---|-----------------|
| Mix Ratio (parts by weight).....                                  | Resin TCC-6060A/Hardener TCC-6060B..... | 100A/25B        |
| Pot Life (1 lb mass) .....  |   | 12 - 15 minutes |
| Initial Mixed Viscosity .....                                     |   | 2,500 cps       |
| Mixed Color .....   |   | Amber           |
| Shelf Life Resin/Hardener (in original unopened containers) ..... |   | 2 years         |

### TYPICAL PHYSICAL PROPERTIES

|  |                      |                 |
|--|----------------------|-----------------|
| Hardness Buildup (150 gram mass @ 77°F) .....  | after 2 hours .....  | 40 - 45 Shore D |
|  | after 24 hours ..... | 50 - 55 Shore D |
|  | after 48 hours ..... | 55 - 60 Shore D |
|  | after 7 days .....   | 58 - 62 Shore D |
| Cured Specific Gravity .....                   |                      | 1.10            |
| Tensile Strength .....                         |                      | 4,000 psi       |
| Tensile Modulus .....                          |                      | 23,000 psi      |
| Compressive Modulus.....                       |                      | 55,000 psi      |
| Elongation .....                               |                      | 200%            |
| Glass Transition Temperature (Tg by DSC) ..... |                      | 59.7°C/140°F    |
| Linear Shrinkage .....                         |                      | <0.001 in/in    |
| Notched Izod Impact Strength.....              |                      | 19.9 ft lbs/in  |
| Tear Strength, split.....                      |                      | 200 pli         |
| Tear Strength, Die "C" Graves .....            |                      | 600 pli         |

### MIXING PROCEDURE

Use an accurate gram scale to properly weigh and proportion A/B components into a straight sided metal or plastic container for mixing. Paper or wax lined mixing containers can contain moisture and contaminate material. Next, use a metal or plastic mixing spatula to gently but thoroughly blend resin and hardener together. Once the urethane appears to be well mixed, pour into a second container and continue to mix for another two to three minutes. This procedure eliminates the possibility of any unmixed material being poured into the final cast. Vacuum degass mixture before casting to produce an air free part.

*Continued on next page*

**MOLDS**

Use TCC Casting Urethane systems for mold construction. You can choose from the TCC-5000 series of flexible Shore 'A' 50-95 systems or TCC-6000 series of semi-rigid Shore 'D' 60-75 systems. Urethane molds should be fully cured before use and require the application of mold release agent such as MR #10 high gloss mold release. MR #10 is a low viscosity, water clear, non-transferable polymer mold release that can be applied by brush or non-aerosol sprayer. Other mold release systems are available.

| <b>TCC CASTING URETHANES</b>                     |                                      |
|--|--------------------------------------|
| <b>Flexible Tooling Elastomers</b>               |                                      |
| TCC-5000A/5050B - 50 Shore A                     | TCC-5000A/5060B - 60 Shore A         |
| TCC-5000A/5070B - 70 Shore A                     | TCC-5000A/5080B - 80 Shore A         |
| TCC-5000A/5081B - 80 Shore A - long working life |                                      |
| TCC-5000A/5090B - 90 Shore A                     | TCC-5000A/5095B - 95 Shore A         |
| <b>Rigid Tooling Elastomers</b>                  |                                      |
| TCC-6000A/6061B - 60 Shore D                     | TCC-6000A/6065B - 65 Shore D         |
| TCC-6060A/B - 60 Shore D - short working life    |                                      |
| TCC-6000A/6070B - 70 Shore D                     | TCC-6075A/6075B - 75 Shore D         |
| <b>Pronto Parts for Rapid Prototyping</b>        |                                      |
| TCC-8020A/TCC-8021B - 75 Shore D                 | TCC-8040A/B - 80 Shore D - High Temp |
| <b>Crystal Clear Casting System</b>              |                                      |
| TCC-6080 A/B - 80 Shore D                        |                                      |

**SANITARY PRECAUTIONS**

Do not take internally. Avoid prolonged breathing of vapors. Work in a well ventilated area. Avoid skin contact. Protective gloves should be worn. If contact occurs: wash skin with soap and water. Avoid eye contact. If contact occurs: rinse well with water for 15 minutes, contact physician.

**STORAGE AND HANDLING**

Store closed containers at 65°F-85°F. Partially used containers must be flushed with dry nitrogen and resealed. Materials are sensitive to moisture contamination.

TCC-6060 Tech/Revised 11/17/10  
Supersedes 5/6/10

Seller cannot anticipate all conditions under which seller's products, or the products of other manufacturers in combination with seller's products, may be used. Seller accepts no responsibility for results obtained by the application of seller's products or the safety and suitability of seller's products, either alone or in combination with other products. Users are advised to make their own test to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, seller delivers the products without warranty of any nature, stated or implied, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of said products, whether used alone or in combination with other products. Purchaser waives any claim against seller for direct, indirect, consequential or exemplary damages against seller, including without limitation, damage which may incur as a result of purchaser's use or misuse of the product or the products failure to conform to any particular specifications.