# TECHNO CAST 3660

**CASTING RESIN –**

**POLYURETHANE ELASTOMER**

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**DESCRIPTION**

TECHNO CAST 3660 is a two-component polyurethane elastomer casting resin formulated with 100% reactive materials, primarily intended for the manufacture of small- and medium-sized technical parts.
It is mainly used for the production of industrial parts requiring high impact and abrasion resistance. It is also ideal for models, molds, prototypes, and various cast pieces.

Its easy 1A/1B volume ratio and low viscosity allow for fast and efficient casting.
Its low exothermic reaction enables castings up to 3 inches thick, with minimal shrinkage depending on design and density.

**FOR PROFESSIONAL USE ONLY.**

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**FEATURES**

- Low viscosity, ensuring easy casting and excellent detail reproduction
- Low exothermic temperature
- Very low linear shrinkage
- Available in several colors
- Fast demolding depending on the design of the parts

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**APPLICATION INSTRUCTIONS**

Mix parts A and B slowly and separately in their original containers.

Add 1 part A to 1 part B by volume and mix thoroughly until a uniform color is obtained.
Minimize air introduction during mixing. A vacuum at 101.3 Kpa / 29.92 inHg may be used for 5–7 minutes to degas the mixture.
Note: using a vacuum reduces pot life.

Never pour into a used silicone mold or any mold that has previously been used with epoxy or polyurethane resin. Always cast into a new, clean, unused mold.

After a 24-hour cure at 22°C, post-cure the parts for 8 hours at 80°C to achieve complete polymerization.
A tacky surface may occur if pre-curing instructions are not followed.
Using a heated autoclave can be very effective to achieve full polymerization.

Curing can be accelerated with a 6–8 hour post-cure at 60°C for thin sections.
**IMPORTANT:** Ensure good ventilation if the product is subjected to this treatment.

Uncured material and equipment can be cleaned with our eco-friendly cleaner **POLY CLEANER™**.

Contact **POLYMÈRES TECHNOLOGIES** for more information.
www.polymerestechnologies.com

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**TYPICAL PROPERTIES (at 22°C)**

**PHYSICAL PROPERTIES (Solid State) – after 7 days at 22°C**

| **PROPERTY** | **METHOD** | **RESULTS** |
|---|---|---|
| Viscosity (cps) Brookfield | ASTM D 2196 | Liquid |
| Specific Gravity (g/cm³) | ASTM D 1475 | Part A: 1.03 / Part B: 1.08 / Mixed: 1.05 |
| Mix Ratio (volume) | | 1:1 |
| Color | Visual | Part A: Milky white or colored / Part B: Amber / Mixed: Milky white or colored |
| Pot life (200 cc) | ASTM D 2471 | 30 min @ 22°C |

| PROPERTY | METHOD | RESULTS |
|---|---|---|
| Exothermic Temperature (200 cc) | ASTM D 2471 | 60–70°C |
| Handling Time (depending on density & design) | | 12 hours @ 22°C |
| 90% Cure | | 1 day @ 22°C |
| Full Cure | | 2–3 days @ 22°C |

**MECHANICAL PROPERTIES**

| TEST | METHOD | RESULT |
|---|---|---|
| Hardness after 1 day | ASTM D 2240 (Shore D) | 40 |
| Hardness after 7 days | ASTM D 2240 (Shore D) | 60 |
| Compressive Strength | ASTM D 695 | 23.9 MPa |
| Tensile Strength | ASTM D 638 Type IV | 18.5 MPa |
| Tensile Modulus | ASTM D 638 Type IV | 26.95 MPa |
| Elongation | ASTM D 638 Type IV | 294% |
| Flexural Modulus | ASTM D 790 | 25.5 MPa |
| Linear Shrinkage after 7 days | ASTM D 2566 | 0.0022 mm/mm |
| Abrasion Resistance (weight loss, Taber CS-17, 1000g, 1000 cycles) | ASTM D 4060 | Pending |
| Flexural Strength, Compression Modulus | ASTM D 790 / D 695 | Pending |

**PRECAUTIONS**

- Read the Safety Data Sheet before use.
- Observe appropriate workplace hygiene measures:

- Ensure good ventilation
- Wear gloves, goggles, and protective clothing

- Do not use below 15°C (60°F). Cure time will vary with ambient temperature.
- Seal container properly: many resins are sensitive to ambient humidity.
  Use **TECHNO DRY 7477** nitrogen blanket to preserve the product.
- Shelf life: once the container is opened, **POLYMÈRES TECHNOLOGIES** assumes no control or responsibility.
- Shelf life in unopened original containers: **1 year**.
- Follow all Provincial and Federal safety regulations.
  In case of eye contact, rinse thoroughly with water and consult a physician.
  In case of skin contact, wash with soap and water.
  Keep out of reach of children.

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**DISCLAIMER**

The customer assumes all risks and responsibilities for the results obtained from using any **POLYMÈRES TECHNOLOGIES** product, including but not limited to the **CHILL EPOXY™** product line and any related processes, regardless of success or failure, and irrespective of any oral or written advice provided by technical support or otherwise related to product use.


**FORMULATEUR DE SOLUTIONS EPOXY, POLYURETHANE, ADHESIF ET PLUS ENCORE.**

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