



**POLYMÈRES**  
technologies

# TECHNO CAST 3180

Elastomeric polyurethane  
casting resin

## **DESCRIPTION**

Introducing TECHNO CAST 3180, the outstanding elastomeric casting system that outperforms all other products in the industry! Formulated with 100% solids and two components, this system is designed for the manufacturing of molds that will be used to cast stones, bricks, pavers, and any other concrete products that don't have negative angles.

The benefits of using TECHNO CAST 3180 are numerous. Thanks to its low viscosity, it can reproduce even the finest details on the surface of natural stones and resin models with ease. The high wear resistance of this system makes it an excellent choice for producing molds that will withstand the test of time. It is highly resistant to abrasive and humid concrete, ensuring that your molds will stay in top condition for longer periods.

The flexibility of TECHNO CAST 3180 is another major benefit, thanks to its good tensile/elongation and tear strength. This allows for easy mechanical and manual demolding operations. Plus, its high elongation rate makes it even more convenient for those working on concrete casting projects.

If you're looking for a reliable and high-quality elastomeric casting system, then TECHNO CAST 3180 is the perfect choice for you. So don't wait any longer, order now and experience the benefits of this outstanding product for yourself!

## **Elastomeric polyurethane casting resin – TECHNO CASTING 3180**

*Our Techno Cast 3180 is an advanced elastomeric polyurethane casting resin that has been specifically designed to meet the requirements of both ROHS and REACH directives. These two directives are essential in ensuring the safety and environmental impact of products in the European Union.*

*The Techno Cast 3180 is manufactured with the highest quality raw materials, ensuring that it is free from any harmful substances. It has been tested and certified to meet the stringent requirements of the ROHS directive, which restricts the use of certain hazardous substances in electrical and electronic equipment.*

## **CHARACTERISTICS**

- Low viscosity
- High wear resistance
- Highly resistant to abrasive and humid concrete.
- Flexible with good tensile/elongation & tear strength
- High elongation rate which allows both easy mechanical and manual demolding operations

## **APPLICATIONS**

Mix equal quantity of parts A and B until homogeneity is obtained. Minimize air entrapment as much as possible. To ensure proper bonding, it is important to prepare the surfaces by cleaning them thoroughly and removing any contaminants such as grease, oil, wax and other substances. It is also recommended to bring both components of the adhesive to room temperature before mixing.

To create a homogenous mixture, measure out the specified amounts of parts A and B and mix them together without introducing any bubbles. For higher volume applications, we recommend using meter-mix equipment equipped with an automatic purge.

For your specific needs, please contact POLYMERES TECHNOLOGIES INC who can suggest appropriate application equipment.

The use of **TECHNO RELEASE 13** is recommended to facilitate the demoulding operation.

Non cured material can be cleaned with the **solvent 205** or **214**.

Moulds can be heated to accelerate the demoulding operation.

Please consult **POLYMERES TECHNOLOGIES** for more details based on your application.



# **TECHNO CAST 3180**

### **TYPICAL PROPERTIES** (at 22°C)

		<b>PART A</b>	<b>PART B</b>	<b>MIXED</b>
Viscosity	Brookfield (cps)	1 200	1 500	1 400
Consistency		Liquid	Liquid	Liquid
Density	g/cm <sup>3</sup>	1,048	1,040	1,044
Mixing Ratio	1. By weight	100	99	100/99
	2. By volume	1	1	1/1
Color		Clear amber	Clear amber	Clear amber
Pot life	200cc 19 litres	8 minutes at 22°C 5 minutes at 22°C		
Demoulding time	200 cc	12-48 hours		
Full cure*		4 days at 22°C		

\* At 23°C it takes 36 hours to obtain half of the curing then an additional 60 hours to reach complete hardness.

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**PHYSICAL PROPERTIES** (solid state) 7 days after cure at 22°C

TEST	METHOD	RESULTS	
Hardness	ASTM D 2240	Shore A	78-82*
Tensile Strength	ASTM D 638 TYPE IV	MPa <sup>1</sup> Psi	7.6 1100
Elongation at break	ASTM D 638 TYPE IV	%	975
Tear Strength	ASTM D 624 DIE C	49.0 N/mm thickness (279 lbs/in thickness)	
Abrasion Resistance Taber	ASTM D-4060 Taber Abraser CS-17 Wheels 1000 g/wheel 1000 revolutions	174 mg gram loss 0.07 mm (2 ¾ mils)	

**PRECAUTIONS**

- Consult Material Safety Data Sheet prior to use.
- Normal health and safety precautions should be observed when handling these products :
  - Ensure good ventilation
  - Wear gloves, safety glasses and waterproof clothes.
- Shelf life of product in original closed containers is **one (1) year**.
- **SHELF LIFE:** The shelf life on **POLYMÈRES** products begins from the date of invoice for that product shipment. **POLYMÈRE's** shelf life only pertains to containers that are unopened and in their original condition.
- **RESEALING:** Many polymers are moisture sensitive, reseal, using one of the following two (2) methods: blanket with nitrogen or use a hair dryer for 30 seconds to cover with dry air **TECHNO DRY 7477**.
- Once the container is opened **POLYMÈRES** has no control or responsibility for the shelf life.
- It is recommended to follow Provincial and Federal safety regulations. In case of eye contact, rinse well with water, in case of skin contact, rinse with soap and water. Keep away from children.

**GUARANTEE**

Seller makes no warranty of any kind, express or implied, as to the merchantability, fitness for any particular purpose, or any other matter with respect to the product **TECHNO CAST 3180**. Since conditions of use are beyond seller's control, buyer assumes all risk of use of this product. Under no circumstances will seller be liable for consequential or incidental damages arising out of the use of this product. Seller's sole obligation shall be to replace the product if found to be defective. It is the user's responsibility to determine the suitability for use of this product under the conditions present at the time of application. M.S.D.S. available upon request.

<sup>1</sup> 1 MPa = 145 lb