



**POLYMÈRES**  
technologies

# TECHNO CAST 3272D

Polyurethane casting  
resin

## DESCRIPTION

**TECHNO CAST 3272D** is used to make castings from rigid and flexible molds. Some of the most common uses of **TECHNO CAST 3272D** are point-of-purchase displays, rapid prototypes, special effects, taxidermy, and sculpture reproductions. However, **TECHNO CAST 3272D** can be used for any application that requires lightweight, hard plastic.

## CHARACTERISTICS

**TECHNO CAST 3272D** is a two-part polyurethane casting system. It is mixed one-to-one by volume and cures at room temperature. **TECHNO CAST 3272D** begins to gel in approximately 3 minutes and cures to a creamy white color.

## APPLICATION INSTRUCTIONS

### PREPARE MOLD

Before you begin to cast a polyurethane mold, you must prepare the mold by applying the appropriate release agent (we recommend **TECHNO RELEASE 53**). Apply release agent sparingly, while coating all internal surfaces of the mold. Too much release agent may cover the details of the mold. You should allow the release agent to dry approximately 10 minutes before you pour the casting.

Please note that silicone molds do not require a release agent. If you want to use an in-mold paint, like series **TECHNO COATING**, you should apply it after the release agent dries.

### MEASURE CURATIVE AND PREPOLYMER

Note: **TECHNO CAST 3272D** provides approximately 3 minutes for you to mix and pour the casting before it begins to gel. Using two clean, dry, plastic containers of equal size, measure equal amounts of the curative (part A) and the prepolymer (part B). If you want to use a filler or powder, use another clean, dry, plastic container to measure the filler or powder. Do not measure more **TECHNO CAST** than you can pour within its pot life. If you have a large mold that requires more **TECHNO CAST 3272D** than you can pour in 3 minutes, you may use a rotational casting method or pour **TECHNO CAST 3272D** more than once (if you pour it more than once, you should do so immediately).

### MIX FILLER OR POWDER INTO CURATIVE AND PREPOLYMER

If you want to use a filler or powder, mix half of the filler or powder into the curative and the remaining half of the filler or powder into the prepolymer before you mix the curative and prepolymer together.

### MIX CURATIVE AND PREPOLYMER

Note: **TECHNO CAST 3272D** provides approximately 3 minutes for you to mix and pour the casting before it begins to gel. After you prepare the mold, measure the curative and prepolymer, mix the filler or powder into the curative and prepolymer (optional), you are ready to pour the curative and prepolymer into another clean, dry, plastic container. Combine the two ingredients for approximately 30 seconds, being careful to prevent air bubbles from forming. Use a plastic or metal spatula to mix **TECHNO CAST 3272 D**.

### POUR CASTING

Note: **TECHNO CAST 3272D** provides approximately 3 minutes for you to mix and pour the casting before it begins to gel. Although **TECHNO CAST 3272D** gels quickly, you should take your time to carefully pour it into the mold. The best way to pour a casting with **TECHNO CAST 3272D** is to tilt your mold slightly and pour into one spot of the mold. Pour slowly so that any air bubbles that may have formed during mixing can break over the lip of the container as it pours out.

### DEMOLD AND CURE MOLD

Once you have poured your casting, do not disturb the mold or demold the casting for 15 to 20 minutes. Although you may work with your cast in as little as 10 minutes after demolding, we recommend that you allow your cast to cure for 1 hour for best results. **TECHNO CAST 3272D** reaches its ultimate strength and hardness in 36 hours. After **TECHNO CAST 3272D** has cured, you may turn, drill, grind, sand, and paint it.

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



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## PHYSICAL PROPERTIES (at 22°C)

		RESIN	HARDENER	MIXED
Color		Clear	Clear	Creamy white
Mix Ratio by	1. By weight	0.885	1	.885/1
	2. By volume	1	1	1/1
Specific Gravity g/cm <sup>3</sup>		.983	1.11	1.05
Viscosity	Cps	90	55	-
Mix Time*		1 minutes		
Pot Life*		3 minutes		
Gel Time*		3 minutes		
Demold Time*		20 minutes		
Cure Time*		24 hours		

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

TEST	METHODS	RESULTS	
Compressive Strength	ASTM D 695	MPa (psi)	90.8 (13166)
Compressive Yield Strength	ASTM D 695	MPa (psi)	35.4 (5133)
Deflection Temperature Under Load,	ASTM D 648	(load 455 Kpa deflection 0.25 mm)	136° F (58° C)
Elongation	ASTM D 412	%	<10
Flexural Strength	ASTM D 790	MPa (psi)	30.3 (43942)
Izod Impact – Notched, Impact Resistance	ASTM D 256	J/m	64.9 (1.21)
Modulus of Elasticity	ASTM D 790	MPa (psi)	1334 (193410)
Modulus of Elasticity Under Compression	ASTM D 695	Mpa (psi)	1098 (159210)
Rebound, Bashore	ASTM D 2632	%	50
Hardness	ASTM D 2240	Shore D	70±2
Stress at a given Strain (1.5 of sample thickness)	ASTM D 790	MPa (psi)	43.3 (6279)
Stress at 5% Strain	ASTM D 790	MPa (psi)	49.7 (7207)
Stress at Maximum Strain)	ASTM D 790	MPa (psi)	50.6 (7337)
Ultimate Tensile	ASTM D 412	psi	6000

## PRECAUTIONS

- Consult Material Safety Data Sheet prior to use.
- Ensure proper ventilation.
- Keep the **TECHNO CAST 3272D** container tightly closed when not in use and store at temperatures between 60–90°F (16°C–32°C).
- Do not expose the curative or prepolymer to moisture! If moisture contaminates **TECHNO CAST 3272D**, it will not cure.
- Shelf life of product in original closed containers is **one (1) year**.
- 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 3272D**. 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.

\* Mix time, pot life, gel time, cure time, and demold time vary depending on mass and component temperature.