



POLYMÈRES
technologies

TECHNO CAST 8101

Epoxy Aluminum-Filled Casting Resin

DESCRIPTION

TECHNO CAST 8101 is a two component aluminum filled epoxy system designed primarily for casting or moulding tooling fixtures or thermoforming moulds.

TECHNO CAST 8101 is of low viscosity and low exothermic reaction making it possible to pour and cure units up to 7.5 cm thick at normal ambient temperature depending on the mass and mould being used.

Make sure to pour no more than 7.5 cm at a time so your exothermic reaction remains stable. If you have a thick mould or large mould, pour multiple times to obtain your desired thickness and mould size.

After the polymerisation is completed, the mould could be exposed to various temperatures from 125°C in continuance up to 150°C intermittence.

This system is ideal for thermoforming plastics such as ABS, PVC, styrene, acrylic, polycarbonate, polypropylene and polyethylene from low, medium and high densities.

CHARACTERISTICS

- *Low viscosity
- *Low exothermic reaction
- *Excellent reproduction qualities
- *Fast demoulding time
- *Easily machinable
- *Negligible shrinkage

APPLICATION INSTRUCTIONS :

It is **strongly recommended to stir part A** before adding part B prior to usage, due to settling of the aluminum fillers in the containers.

Add **10 part B to 100 part A** per **weight** and mix thoroughly until a uniform consistency is obtained. Make sure to scrape material away from sides and bottom of container. Avoid air entrapment and pour slowly in adequately prepared moulds.

It is recommended to use a release agent such as **Techno Release 10** to facilitate demoulding operations.

Non cured material can be cleaned with the **solvent 213**.

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

PHYSICAL PROPERTIES (at 22°C)

		PART A	PART B	MIXED
Viscosity	Brookfield cps	40 000	150	7 500
Consistency		Liquid	Liquid	Liquid
Density	(g/cm ³)	1.82	0.92	1.67
Mixing Ratio	Volume	5	1	5-1
	Weight	100	10	100/10
Color		Gray	Ambre	Gray
Pot life	200 cc	120 minutes at 22°C		
Gel Time	200 cc	180 minutes at 22°C		
Demold time	200 cc	16 - 18 heures at 22°C		
Exothermic curve (minutes/°C)	Mass of 3.5 kg 2 inches deep	190 minutes / 65-70°C		
Full cure at 25 °C (days)*		7 days		

***After material has solidified, the curing process can be accelerated at 52 °C (125 °F).**

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

TEST	METHOD	RESULTS	
Hardness	ASTM D 2240-85	Shore D	84
Tensile strength	ASTM D 638M-81 Type IV	MPa*	20.3
Compressive Strength	ASTM D 695-80	Mpa	93.1
Flexural Strength	ASTM D 790 M M-82	Mpa	38.2
Linear Shrinkage	ASTM D 2566-79	cm/cm	0.0002
Abrasion Resistance	Taber CS 17-1000 gr gm loss/1000 cycles		0.122
Water Absorption 24 hours 7 days 2 hours in boiling water	ASTM D 570-81	%	0.11 0.29 0.51

PRECAUTIONS

Consult Material Safety Data Sheet prior to use.

Normal health and safety precautions should be observed when handling these products :

- Ensure proper ventilation
- Do not apply at temperature lower than 13°C (55°F)
- Wear gloves, safety glasses and waterproof clothes.

Shelf life of product in original closed containers is **one (1) year**.

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 8101**. 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.

* 1 MPa = 145 lb/po²

² 53.4 Kj/m = 1 lbF/po²

³ 1 kPa = .145lb/po²



TECHNO CAST **8101**