POLYMÈRES technologies

TECHNO CAST 8101 HT

Epoxy aluminium wear compound

DESCRIPTION

TECHNO CAST 8101 HT is a two component Hi-Temp epoxy mainly formulated for the production of molds used in vacuum forming operation or parts exposed to high temperature. This system has a very high temperature strength. It retains its hardness and its structural and propreties even if applications requires up to almost 180 °C (intermittent). Its low viscosity allows to replicate intricate details.

CAST TECHNO 8101 HT makes resin easily spreadable and possible to harden at room temperature for units whose thickness can reach up to 7.5 cm, depending on the weight and design. This innovative product is well known for its rapid post cure reaches its thermal properties after as little as a 5 hours post cure schedule. It is also possible to produce a mold or a part that reaches its maximum thermal resistance and utility, in less than 5-7 hours.

CHARACTERISTICS

- Low viscosity
- Low exothermic reaction
- Excellent reproduction quality
- Fast demould time
- Easily machinable
- Negligible shrinkage

APPLICATIONS

It is recommended to shake well part A before adding part B. It should eliminate mineral deposits.

Add **10** part **B** to **100** part **A** per **weight** and mix thoroughly until a uniform consistency/color is obtained. Minimize most as possible formation of air in the mixture and pour slowly in molds prepared adequately.

POST CURE:

Pour the mold and let sit for a period of 24 hours at 22 °C. After this period, parts will be brittle, so handle with care. Subsequently, perform the following cooking schedule:

- 2 hours at 80 °C
- 3 hours at 150 °C

It is possible immediately after casting, to save time, to proceed the above-mentioned post cure.

It is recommended that you use the **TECHNO RELEASE 110** release agent to facilitate operations.

Non cured material can be cleaned with the solvent **T-913**.

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	250	11000
		Liquid	Liquid	Liquid
Density	(g/cm^3)	1.80	0.92	1.68
Mixing Ratio	Weight	100	10	100/10
Pot life	200 cc	120 minutes at 22°C		
Gel Time	200 cc	180 minutes at 22°C		
Demould time	200 cc	16 - 18 heures at 22°C		
Peak exothermic temperature	ASTM D 2471	190 minutes / 65-70°C		
Full cure		7 days		

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

TEST	METHOD	RESULTS	
Hardness	ASTM D 785	Shore D	84
Tensile strength	ASTM D 638	MPa†	35.4
Compressive Strength	ASTM D 695	Mpa	117.4
Flexural Strength	ASTM D 790	Mpa	71.5
Linear Shrinkage	ASTM D 2566	cm/cm	0.0002
Abrasion Resistance	Taber CS 17-1000 gr gm loss/1000 cycles		0.034
Water Absorption 24 hours 7 days 2 hours in boiling water	ASTM D 570-81	%	 0.05 0.16 0.30

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**.
- Once the container is opened **POLYMÈRES TECHNOLOGIES** 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.