

Ambient cure low viscous casting system

Description

Lapox Granito Cast is two component modified, epoxy based system suitable for clear casting application. The system is clear, having excellent optical properties with negligible shrinkage on curing. Faster productivity can be achieved, if curing is performed at higher temperature between 40°C and 60°C. Curing at higher temperature is recommended to achieve optimum performance.

Applications

Casting of decorative parts
Handicraft items
Paper weights
Table top

Advantages

Excellent clarity
Good hardness development
Good wetting properties
High gloss finish
Long pot life
Low viscosity
Water and chemical resistant

Typical specifications

Test	Unit	Reference	Value	
			Resin	Hardener
Description	-	Visual	Clear, transparent liquid	Clear liquid
Viscosity at 25°C ¹	m Pas	ASTM D2196	1,600 - 2,600	10 - 25
Colour	APHA	ASTM D1209	Max 40	--
Specific gravity	-	-	1.15 - 1.20	0.92 - 0.96

¹Viscosity by Brookfield viscometer

Mix specifications

Test	Unit	Reference	Value
Mixing ratio (resin : hardener)	w/w	-	100 : 33
Mix viscosity at 25°C	m Pas	ASTM D2196	400 - 700
Pot life ¹	Minutes	ASTM D2471	450 - 600
Peak exotherm temperature ²	°C	-	Max 55

¹Pot life of 100 g mix mass at 25 ± 1°C in plastic disposable cup by 'Gardco' gel timer

²Total 100 g mix mass in plastic disposable cup at 25°C

After cure specifications

Test	Unit	Reference	Value
Hardness ¹	Shore D	ISO/ R868	75 - 80
Water absorption (24 hours immersion)	%	ASTM D670-63	Max 0.4
Optical clarity	-	Visual	Excellent
Tg, RT curing, 24 hours ²	°C	DSC	45 - 55
Tg, Post curing 50°C, 18 hours ²	°C	DSC	65 - 75
Tg, Post curing 80°C, 3 hours ²	°C	DSC	75 - 80

¹Hardness checked for 20 mm casting, after 24 hours curing

²Tg (Glass transition temperature) development behavior

Processing

Mixing: Mixing is critical and must be accurate. Take resin and hardener in desired ratios. The combined liquids must be thoroughly mixed, manually or mechanically to completely remove any haziness or streaks. Scrap the sides and base of the mixing pot before transferring the mix to a desired mould for casting. It is advisable to apply the vacuum to remove air from the mix just prior to pouring into the mould. It is important to mix small quantity at a time as epoxy systems tend to give exotherm when kept in a mass.

Applications: Mix mass should then be poured into a mould. The mould can be hard or made of silicone rubber. Moulding can be carried out by gravity or under vacuum. It does not trap air easily and does not heat up when used properly. Excessive humidity (above ~65%), low daylight and low temperature (less than 20°C) may retard the curing. Lapox Granito Cast system may not work effectively in the monsoon season. Ensure ambient material and workshop temperature is between 20°C and 35°C and humidity level below 65%. Filled mould can also be kept under vacuum to achieve air free components.

Troubleshooting

Problem	Cause
Uncured after 24 hours to 48 hours	Wrong mix ratio and or low ambient temperature
Sticky greasy hazy surface	High humidity
Air bubbles are entrapped	Mixing was too fast and did not have time to release air

Packaging

Lapox Granito Cast is available in 1.3 kg bottles, 4 kg jerry cans, 12 kg HDPE carboys and 260 kg MS | HDPE drums. Other packing may be considered on request.

Storage and handling

Lapox Granito Cast should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. This product has a shelf life of one year, if stored in its original container between 2°C and 40°C away from humidity and excessive heat.

Safety

Wear personal protective equipment (PPE). Avoid contact with the eyes and skin. In case of direct contact and irritation, it should be washed off immediately with soap and warm water. Avoid breathing vapours, mist or gas. Please refer to the Safety Data Sheet (SDS) of Lapox Granito Cast for detailed safety instructions.

Spills and disposal

In case of spills, sweep up and shovel the spilled material. Keep spilled material in suitable, closed containers for disposal. Soak up with an absorbent such as clay, sand or other suitable material. Flush area with water to remove trace residue. Do not allow the product to reach the sewage system. Waste must be disposed of in accordance with federal, state or local regulations, as applicable.

Contact

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Note

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