

# LAPOX<sup>®</sup> L-12 | AH-315

Technical Data Sheet | Polymers Business



## Hot cure epoxy casting system

Lapox L-12	100	pbw
Lapox AH-315	32	pbw

## Description

Lapox L-12 is a liquid, unmodified epoxy resin of medium viscosity which can be used with various hardeners for making fiber reinforced composites. Epoxy curing agent Lapox AH-315 is a low viscosity, slow curing liquid hardener at room temperature. It gives very long pot life at room temperature with moderate glass transition temperature.

## Applications

Recommended for large size component laminates for industrial and structural use  
Recreational products  
Tooling

## Processing

Filament winding  
Pultrusion  
Resin transfer moulding  
Wet lay up

## Typical specifications

### Lapox L-12

Properties	Unit	Test method	Values
Appearance	-	Visual	Clear, viscous liquid
Colour	GS	ASTM D1544	Max 1
Viscosity at 25°C	m Pas	ASTM D2196	9,000 - 12,000
Epoxy content	Eq/kg	ASTM D1652	5.26 - 5.55
Specific gravity at 25°C	-	ASTM D792	1.1 - 1.2

### Lapox AH-315

Properties	Unit	Test method	Values
Appearance	-	Visual	Clear liquid
Colour	GS	ASTM D1544	-
Viscosity at 25°C	m Pas	ASTM D2196	5 - 15
Specific gravity at 25°C	-	ASTM D792	0.93 - 0.96

## Processing properties

Properties	Unit	Test method	Values
Mixing ratio (by weight)	-	Visual	Resin: 100 Hardener: 32
Initial mix viscosity	m Pas	ASTM D2196	500 - 800 / 25°C
Pot life at 25°C	Hours	ASTM D2471	7 - 9
Curing schedule	°C	-	80°C / 6 hours - 8 hours

## Typical properties of neat cured system

Composition:  
Curing schedule: 80°C / 6 hours to 8 hours  
Determined on standard test specimen at 25°C

Properties	Unit	Test method	Values
Cured density	g/cm <sup>3</sup>	DIN 55990	-
Tensile strength	m Pa	ISO 527	60 - 75
Elongation at break	%	ISO 527	5 - 8
Elastic modulus in tension	g Pa	ISO 527	2.5 - 3.0
Flexural strength	m Pa	ISO 178	105 - 115
Flexural elongation at break	%	ISO 178	6 - 10
Elastic modulus in flexural	g Pa	ISO 178	2.8 - 3.2
Glass transition temperature (DSC)	°C	ISO 11357 - 2	85 - 95
Co-efficient of linear thermal expansion (Mean value for temperature range 20°C to 60°C)	K <sup>-1</sup>	DIN 53752	X 10 <sup>-6</sup>
Water absorption 25°C / 24 hours	% w/w	ISO - 62	0.15

## Packaging

Lapox L-12 is available in 30 kg, 110 kg and 240 kg carboys. Lapox AH-315 is available in 1 kg HDPE bottles. Other packing may be considered on request.

## Storage and handling

Lapox L-12 and Lapox AH-315 have a shelf-life of at least 2 years if stored in its original container away from humidity and excessive heat. Resin may crystallise if stored below 15°C. Crystallisation may be reversed completely by heating the material to 60°C to 70°C. It is recommended to use resin and hardener only when they are clear and free from cloudiness. Hardener is sensitive to moisture. Containers must be closed properly immediately after use. Please refer to the Safety Data Sheet (SDS) for detailed instructions on storage and handling.

## Safety

Wear personal protective equipment (PPE). Avoid contact with the eyes and skin. In case of direct contact and irritation, the resin should be washed off immediately with soap and warm water. Avoid breathing vapours, mist or gas. Please refer to the SDS 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

Lapox<sup>®</sup> is a registered trademark of Atul Ltd.

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## **Manufacturing site**

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