

## Hot cure epoxy casting system

Lapox ARL-136	100	pbw
Lapox AH-126	90	pbw

## Description

Lapox ARL-136 is a modified bisphenol-A based epoxy liquid resin having moderate viscosity and Lapox AH-126 is a liquid modified anhydride. This system provides very long pot life at ambient temperature. Fiber wetting property of this system is extremely good and hence high production rate can be achieved. Appropriately cured system is able to give excellent mechanical and electrical properties with good surface finish.

## Applications

FRP composites parts like reverse osmosis pipes, rods, bars for electrical, chemical and marine application  
Recreation activity parts  
Sports goods etc.

## Processing

Filament winding  
Pultrusion  
Resin transfer moulding

## Typical specifications

### Lapox ARL-136

Properties	Unit	Test method	Values
Appearance	-	Visual	Clear to hazy liquid
Colour	GS	ASTM D1544	-
Viscosity at 25°C	m Pas	ASTM D2196	2,500 - 4,500
Epoxy content	Eq/kg	ASTM D1652	5.37 - 5.68
Specific gravity at 25°C	-	ASTM D792	1.14 - 1.17

### Lapox AH-126

Properties	Unit	Test method	Values
Appearance	-	Visual	Yellow liquid
Colour	GS	ASTM D1544	-
Viscosity at 25°C	m Pas	ASTM D2196	100 - 300
Specific gravity at 25°C	-	ASTM D792	1.1 - 1.2

## Processing properties

Properties	Unit	Test method	Values
Mixing ratio (by weight)	-	Visual	Resin: 100 Hardener: 90
Mixing ratio (by volume)	-	Visual	-
Initial mix viscosity	m Pas	ASTM D2196	300 - 600 / 25°C
Pot life at 25°C	Hours	ASTM D2471	> 8
Gel time	Minutes	DIN 16945 / 6.3.1	9 - 10 / 100°C
			4 - 6 / 120°C
			1.5 - 2.0 / 140°C
Curing schedule	°C / hours	-	100°C / 1 + 160°C / 4 - 8

## Typical properties of neat cured system

Composition:  
Curing schedule: 100°C / 1 hour + 160°C / 4 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	80 - 95
Elongation at break	%	ISO 527	4 - 6
Elastic modulus in tension	g Pa	ISO 527	3 - 4
Flexural strength	m Pa	ISO 178	140 - 170
Flexural elongation at break	%	ISO 178	6 - 8
Elastic modulus in flexural	g Pa	ISO 178	3 - 4
Compressive strength	m Pa	ISO 604	110 - 130
Glass transition temperature (DSC)	°C	ISO 11357 - 2	115 - 125
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	IEC 60062	0.2 - 0.3

## Typical electrical properties of filled cured system

Cured at:

Properties	Unit	Test method	Values
Breakdown strength (50 Hz, 25°C)	kV/mm	IEC 60243	16 - 18
Loss factor (50 Hz, 25°C)	%	IEC 60250	2 - 3
Dielectric constant (50 Hz, 25°C)	-	IEC 60250	3 - 4
Volume resistivity at 1,000 V, 25°C	ohm.cm	IEC 60093 / DIN 53482	10 <sup>16</sup>
Surface resistivity at 1,000 V, 25°C	ohm.cm	IEC 60093 / DIN 53482	10 <sup>13</sup>
Arc resistance	Seconds	IEC 61621 / ASTM D495	-
Tracking resistance	V	IEC 60112	> 600

## Packaging

Lapox ARL-136 is available in 30 kg, 110 kg and 240 kg carboys. And Lapox AH-126 is available in 30 kg carboys. Other packing may be considered on request.

## Storage and handling

Lapox ARL-136 and Lapox AH-126 have a shelf-life of at least 2 years if stored in its original container away from humidity and excessive heat. Care must be taken to avoid direct contact with skin as far as possible. If contact does occur, then wash off immediately with soap and warm water. Please refer to the Safety Data Sheet (SDS) for detailed instructions on storage and handling.

# LAPOX<sup>®</sup> ARL-136 | AH-126

Technical Data Sheet | Polymers Business



<b>Safety</b>	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.
<b>Spills and disposal</b>	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.
<b>Contact</b>	E-mail: <a href="mailto:polymers@atul.co.in">polymers@atul.co.in</a> Website: <a href="http://www.atul.co.in">www.atul.co.in</a>
<b>Note</b>	Lapox <sup>®</sup> is a registered trademark of Atul Ltd.

## Manufacturing site

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