

**Ambient cure chemical resistance coating system**

**Description** Lapox B-11 is unmodified epoxy resin based on bisphenol-A. Lapox K-49 is low viscosity modified aromatic amine curing agent. When resin and hardeners are used in appropriate ratio, this provides excellent chemical resistance and mechanical strength. Appropriately cured film withstands variety of chemicals including acid, alkali and solvents.

**Advantages** Excellent chemical and thermal resistance  
 High mechanical strength  
 Solvent free

**Applications** Chemical resistant coating  
 Chemical resistance tank linings

**Typical specifications**

Test	Unit	Reference	Value	
			Resin	Hardener
Description	-	Visual	Clear viscous liquid	Clear brown liquid
Colour	GS	ASTM D1544	Max 1	Max 13
Viscosity at 25°C <sup>1</sup>	m Pas	ASTM D2196	11,000 - 15,000	700 - 900
Epoxy value	Eq/kg	ASTM D1652	5.25 - 5.45	-
Amine value	Eq/kg	ASTM D2073	-	4.7 - 5.0
Density	g/cc	ASTM D792	1.15 - 1.17	1.05 - 1.1

<sup>1</sup>Viscosity by Brookfield viscometer

**Mix specifications**

Test	Unit	Reference	Value
Mixing ratio (resin : hardener)	By weight	-	100:60
Mix viscosity <sup>1</sup>	m Pas	ASTM D2196	7,000 - 10,000
Pot life <sup>2</sup>	Minutes	ASTM D2471	110 - 150
Hardness <sup>3</sup>	Shore D	ISO 868	Min 70

<sup>1</sup>Viscosity by Brookfield viscometer at 30 ± 1°C

<sup>2</sup>Pot life of 100 g mix mass at 25 ± 1°C in plastic disposable cup by 'Gardco' gel timer

<sup>3</sup>Hardness checked for 20 mm casting, after 24 hours curing at 25°C.

**Chemical resistance of coated specimen<sup>1</sup>**

	Reagents	Conclusion
Water	Deionised water	Resistant
	Sea water	Resistant
	Formic Acid	Resistant (upto 3 months)
	Lactic Acid	Failure
Acids	Sulfuric Acid (conc.)	Failure
	HCl, 30%	Failure
	HCl, 15%	Resistant
	HNO <sub>3</sub> (conc.)	Failure
	HNO <sub>3</sub> , 10%	Resistant
	Phosphoric acid, 25%	Resistant
Alkalis	Acetic acid, 10%	Resistant
	Liquor Ammonia	Resistant
	Ammonium Hydroxide, 10%	Resistant
	Caustic Soda, 10%	Resistant

<sup>1</sup>Chemical resistance as per ASTM D 543 of specimen cured at 25°C for 7 days. Chemical resistant data with one year immersion in selected reagents were presented in above table.

**Processing**

**Surface preparation:** The adherents must be thoroughly degreased with a good degreasing solvent (e.g. toluene, acetone trichloroethylene) and abraded with coarse emery paper or chemically etched. Inadequately pre-treated substrates may not bond satisfactorily.

**Application:** The mixed mass is coat by brush, roller or spray. The mix must be used within its pot life. Mix mass should be poured into flat or open trays to maximize working time.

**Curing:** Curing normally takes place at room temperature within about 24 hours depending on the ambient temperature but may be accelerated by the application of heat.

**Packaging**

Lapox B-11 and Lapox K-49 are available in 200 kg carboy. Other packing may be considered on request.

**Storage and handling**

Lapox B-11 and Lapox K-49 should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. Lapox B-11 has shelf-life of at least two years while Lapox K-49 has shelf-life of one year, if stored in its original container between 2°C and 30°C away from humidity and excessive heat. 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, it 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.

# LAPOX<sup>®</sup> B-11 | K-49

Technical Data Sheet | Polymers Business



## Contact

E-mail: [polymers@atul.co.in](mailto:polymers@atul.co.in)  
Website: [www.atul.co.in](http://www.atul.co.in)

## Note

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

## Manufacturing site

Atul 396 020, Gujarat, India  
Telephone: (+91 2632) 230000 | 233261  
E-mail: [contact@atul.co.in](mailto:contact@atul.co.in)

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