

## Ambient cure flooring system for glossy finish

**Description** Lapox ARB-22 is reactive diluent modified epoxy resin based on bisphenol-A. Lapox AH-428 is clear transparent, low viscosity modified cycloaliphatic amine curing agent. When both components are mixed in recommended ratio, it provides high glossy films that are resistant to various chemicals. Low mix viscosity of system permits high filler loading and exhibit outstanding mechanical and chemical resistant properties.

**Advantages**

- Excellent glossy finish
- Good chemical resistance
- Good resistance to amine blush
- Light color
- Low viscosity

**Applications**

- Clear coatings
- Laminations and castings
- Decorative floor coatings
- Maintenance coatings

### Typical specifications

Test	Unit	Reference	Value	
			Resin	Hardener
Description	-	Visual	Clear liquid	Clear liquid
Colour	GS	ASTM D1544	Max 1	Max 1
Viscosity at 25°C <sup>1</sup>	m Pas	ASTM D2196	800 - 1200	50 - 150
Epoxy value	Eq/kg	ASTM D1652	4.9 - 5.2	-
Amine value	Eq/kg	ASTM D2073	-	340 - 390
Density	g/cc	ASTM D792	1.13 - 1.16	0.97 - 0.99

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

### Mix specifications

Test	Unit	Reference	Value
Mixing ratio (resin : hardener)	By weight	-	100 : 45
Mix viscosity at 25°C	m Pas	ASTM D2196	300 - 500
Specific gravity (mix mass)	-	-	1.08 - 1.10
Pot life at 25°C <sup>1</sup>	Minutes	ASTM D2471	60 - 70
Peak exotherm temperature <sup>2</sup>	°C	ASTM D2471	Max 160
Surface dry <sup>3</sup>	Minutes	ASTM D5895	120 - 150
Touch dry <sup>3</sup>	Minutes	ASTM D5895	300 - 320

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

<sup>2</sup>Total 100 g mix mass at 25± 1°C in plastic disposable cup by Temperature data logger

<sup>3</sup>Drying time of 200 micron film on glass plate at 25± 1°C

## After cure specifications

Test	Unit	Reference	Value
Hardness <sup>1</sup>	Shore D	ISO 868	70 - 75
Water absorption (24 hours immersion)	%	ISO 62	Max 0.5
Optical clarity	-	Visual	Excellent

<sup>1</sup>Hardness checked for 20 mm casting, after 24 hours curing

## Recommended formulation for self-leveling floor

Component	Unit	Self-leveling
Resin, Lapox ARB-22	Parts by weight	100
Hardener, Lapox AH-428	Parts by weight	45
Defoamer, K-210	Parts by weight	1 - 2
Quartz sand 300 $\mu$	Parts by weight	200 - 250
Silica floor, 300 mesh	Parts by weight	140 - 160
Specific gravity	-	1.7
Consistency of mix mass	-	Flowable
Compressive strength, after 7 days	kg/cm <sup>2</sup>	450 - 500
Area coverage	kg/m <sup>2</sup> per mm	2.0 - 2.5

## Application procedure for self-leveling floor

Ensure concrete surface is dry, clean and free from oil, grease and other contaminants. Freshly laid concrete must be cured for at least 28 days.

Remove loose particles and dust by wire brush or any suitable mechanical tools.

Prior to the application of self-levelling epoxy flooring, it is advisable to seal the concrete pores by epoxy primer system Lapox B-47 | Lapox AH-713.

Prepare mixer as per above guideline formulation. Mixing is critical and must be accurate

Mix all ingredients thoroughly with mechanical agitator for 3 to 4 minutes to achieve homogeneous consistency. Scrap the sides and base of the mixing pot before transferring.

Immediately, pour the mixer on primed concrete surface.

It is important to mix small quantity at a time as epoxy systems tend to give exotherm when kept as large mix mass. Application should be done by notched trowel followed by spike roller to remove entrapped air.

Excessive humidity (above ~80%), low daylight and low temperature (less than 20°C) may retard the curing and slight amine blush (white patches) may appear. The system may not work efficiently during monsoon season. Ensure ambient temperature is between 20°C and 35°C and humidity level below 80%.

Due to the flowable nature and self-levelling characteristic, it provide glossy finish with good mechanical and chemical resistance properties.

Self-levelling flooring can be applied in storage areas, garages, warehouses, office buildings, and more.

## 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

<b>Packaging</b>	Lapox ARB-22 and Lapox AH-428 is available in 200 kg carboy. Other packing may be considered on request.
<b>Storage and handling</b>	Lapox ARB-42 and Lapox AH-428 should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. Lapox ARB-42 has shelf-life of at least two years while Lapox AH-428 has shelf-life of one year, if stored in its original container between 2°C and 40°C away from humidity, air and excessive heat. Please refer to the Safety Data Sheet (SDS) for detailed instructions on storage and handling.
<b>Safety</b>	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.
<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

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

Disclaimer: The information contained herein is for information purposes only. While enough care is taken in disclosing the information, users of this information are advised to cross-check the same depending upon use | application. Atul Ltd does not give any assurance or warranty or guarantee in regard to the accuracy or completeness of the information and no claim or liability will be accepted or entertained in regard thereto. Atul Ltd makes no warranty of any kind, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or performance or usage of trade.