

Ambient cure low viscous epoxy primer system

Description Lapox B-47 is reactive diluent modified epoxy resin based on bisphenol-A. Lapox AH-714 is medium viscosity polyamide curing agent. When resin and hardeners are used in appropriate ratio, this provides excellent adhesion to the substrate with high mechanical strength. Low mix viscosity of system permits high filler loading and used in multipurpose civil engineering applications.

Advantages
 Excellent adhesion
 Good chemical resistance
 Very low shrinkage

Applications
 Primer, mortar and screed
 Self-leveling floors
 Sealing of cracks in concrete structure

Typical specifications

Test	Unit	Reference	Value	
			Resin	Hardener
Description	-	Visual	Clear liquid	Yellow brown liquid
Colour	GS	ASTM D1544	Max 1	Max 8
Viscosity at 25°C ¹	m Pas	ASTM D2196	450 - 650	500 - 1,000
Epoxy value	Eq/kg	ASTM D1652	5.2 - 5.50	-
Amine value	Eq/kg	ASTM D2073	-	425 - 450
Density	g/cc	ASTM D792	1.15 - 1.17	0.96 - 0.98

¹Viscosity by Brookfield viscometer

Mix specifications

Test	Unit	Reference	Value
Mixing ratio (resin : hardener)	By weight	-	100 : 50
Mix viscosity at 25°C	m Pas	ASTM D2196	500 - 700
Specific gravity (mix mass)	-	-	1.05
Pot life at 25°C ¹	Minutes	ASTM D2471	140 - 180
Peak exotherm temperature ²	°C	ASTM D2471	100 - 120
Surface dry ³	Hours	-	2 - 3
Touch dry ³	Hours	-	4 - 6

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

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

³Drying time of 200 micron film on glass plate at 30°C

Recommended formulation and performance specifications for primer

Component	Unit	Grouting
Resin Lapox B-47	Parts by weight	100
Hardener Lapox AH-714	Parts by weight	50
Accelerator Lapox AC-14	Parts by weight	1 - 5
Specific gravity of mix	-	1.10
Consistency of mix mass	-	Flowable
Area coverage	g/m ²	220 - 230

Application procedure for primer

- Ensure concrete surface is dry, clean and free from oil, grease and other contaminants
- Remove loose particles and dust by Wire Brush or any suitable mechanical tools
- Mix Resin and Hardener in specified proportion in disposable bowl thoroughly
- Apply mix mass uniformly in thin layer on substrates with help of brush, spreader or roller
- If required apply second coat after 3 to 4 hours of first coat application
- The subsequent coats (Top coats) can be applied after 3 to 4 hours of primer application, when it just tacky

Application procedure for Crack filling and Repairs

- Ensure concrete surface is dry, clean and free from oil, grease and other contaminants
- Remove loose particles and dust by Wire Brush or any suitable mechanical tools
- Mix Resin and Hardener in specified proportion in disposable bowl thoroughly
If cracks are minor (< 2 mm) and concrete has not lost its integrity, then sealing of cracks can be done with epoxy system by means of gravity method
- If cracks are in the magnitude of >2mm width, then crack must be open by making 'V' groove and through cleaning by compressed air to remove dirt. Mix Resin and Hardener thoroughly followed by addition of quartz sand to achieve homogeneous consistency. Pour the mixer into cracks
- Allow to cure for minimum 7 days for optimum results.

Injection Grouting

- Ensure that the surface of concrete structure having cracks are clean | dry and remove the loose concrete
- Insert PVC nozzles at the two ends of cracks and fix well using Lapox Ultraseal
- Mix Lacrete Resin and Hardener in specified proportion in disposable bowl thoroughly
Fill up mix mixture into Injection Grouting Gun and inject the material in the nozzle at a pressure of 7 to 8 bar. The material will fill up in all cavities and will come out from other nozzle when the crack is completely filled
- Allow to cure for minimum 7 days for optimum results.

Application procedure for bonding old to new concrete

- Ensure concrete surface is dry, clean and free from oil, grease and other contaminants
- Remove loose particles and dust by Wire Brush or any suitable mechanical tools
- Mix Resin and Hardener in specified proportion in disposable bowl thoroughly
- Apply thin coat of epoxy Resin and Hardener mix on surface of old concrete by brush, spreader or roller. Allow to cure for 3 to 4 hours.
- If first coat absorbed significantly, apply second coat after 3 to 4 hours
- Allow to cure for 6 - 8 hrs. When epoxy coat is just tacky, apply new concrete at this stage

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 B-47 and Lapox AH-714 is available in 200 kg carboy. Other packing may be considered on request.

Storage and handling

Lapox B-47 and Lapox AH-714 should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. Lapox B-47 has shelf-life of two years while Lapox AH-714 has shelf-life of one year, if stored in its original container between 2°C and 40°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.

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Note

Lapox[®] is a registered trademark of Atul Ltd.

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