

LAVAPOXY HS

High Strength Three Part Epoxy Mortar

Description:

LAVAPOXY HS is a three-components, solvent free, high quality epoxy based mortar for repair of structural defected elements that require high compressive strength and durable chemical resistant repair. The system is based on an epoxy resin with a modified hardener and carefully selected and graded high strength aggregate, to produce very strong, high quality non-shrink mortar. LAVAPOXY HS can be applied by trowel and especially suitable as a repairing mortar with high mechanical and chemical properties for concrete repair. It can be applied for vertical and horizontal applications.

Uses:

LAVAPOXY HS is suitable for wide range of repair application including:

- General concrete repair mortar for exterior and interior application.
- Repair of structural concrete defected elements.
- Repair of surfaces subjected to mechanical & chemical attacks.
- Re-profiling of expansion joints and concrete edges.
- For profiling and water treatment for the head of pile caps.
- Can be used for sewerage works and manhole lining.
- Repair for walkways, garages, residence driveways.
- Repair of concrete floors prior to epoxy, Polyurethane systems application
- Repair damaged floors in very tough and harsh environments as for industrial and heavy traffic floors.
- Repair of concrete in load bearing structures, bridges, channels, dams and tunnels.

Advantages:

- Pre-weighed quality-controlled materials ensure consistency and reduce risk of site errors.
- Excellent bonding strength with all concrete surfaces
- Non shrink mortar with high compressive strength
- High impact and abrasion resistance with high mechanical strength
- Resistant to wide range of acids, alkalis and industrial chemicals
- Extreme wear resistance due to the special hard aggregate used.
- Excellent chemical resistance against wide range of acids, alkalis and industrial chemicals.
- Non slip and easy cleaning properties.

Instructions for Use:

Surface Preparation:

In concrete repairs, proper surface preparation is essential for obtaining good results. Mark the boundary of the damaged areas of concrete and then cut neatly by saw cutting machine or disc grinder to a depth of 10 mm. Then Chip the concrete within the boundary down to sound base using sharp tools or chipping hammer. All corroded steel should be completely exposed including the rear side of the bar to enable thorough cleaning. In case that reinforcing bars section is reduced due to oxidization, integrate them with additional bar reinforcement.

The concrete substrate should be clean from all grease, contaminants, oil and loose material. After completing the chipping, clean the surface with steel brush. In case of deep rusting or contamination, it is recommended to clean using sand blasting to reinforcing steel. Particular attention should be paid to the rear of the bar to ensure all corrosion products have been removed. Once the reinforcing steel has been cleaned it should be coated immediately with one coat of LVAZINC EP – a two component Epoxy Zinc Primer or LVAFER – a two component cementitious corrosion inhibiting primer.

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At the time of application, the defected area should be primed with ARMOPRIME EP70, using stiff brush. If the primer appears to be absorbed into the surface easily, it will be necessary to apply a second coat, once the initial coat is tack free. Allow the primer to be tacky prior to application of LAVAPOXY HS.

Mixing:

LAVAPOXY HS is supplied as a kit containing three pre-weighed components ready for onsite mixing, resin (part A), hardener (part B) and filler (part C). First, the two resin components A and B should be stirred separately for two minutes to ensure that the contents are blended thoroughly. Then add contents of part B (hardener) to part A (base) contents, and mix thoroughly for few minutes, and slowly, add the contents of part C (filler) while mixing till a homogeneous lump free consistency mix is achieved. Do not add thinner to the mixture, the product is designed to be ready for use.

Application:

Apply LAVAPOXY HS manually with a trowel or spatula to the prepared and primed surface of concrete. The mix should be applied firmly to the surface to ensure a complete compaction and bonding to the substrate. Use a steel trowel to finish the applied mortar before it sets. The recommended applied thickness for horizontal application would be 5 mm up to 60 mm in one layer and for vertical application from 5 to 15 mm in one layer. If more thickness is needed, apply subsequent layers with 10 to 12 hours intervals. If the extra layers are applied beyond the re-coating time then prime the surface again.

For floor repair application, ensure proper coverage while applying to concrete surfaces and proper pushing into cracks, when repairing static cracks in concrete surface of the floor. Use a clean trowel or spatula to avoid to build of lumps in the epoxy mortar layer.

Standards:

- EN 1504-3, class R4
- ASTM D 4541, C579, C580
- BS 6319-2

TECHNICAL PROPERTIES	
Appearance	Light Gray
Mix Density	2.10 ± 0.03 kg/lit
Potlife time of mixture	60 minutes @25°C
Temperature of Application	From +5°C to +40°C
Application Thickness	Horizontal: up to 60 mm Vertical: 5 to 15 mm
Drying Time	Surface dry in 24 hours. Recoat after 16 hours hours in normal drying conditions.
Adhesion bond to concrete (ASTM D4541)	≥2.0 N/mm ²
Compressive Strength (ASTM C579)	>80 N/mm ² @ 7 days
Flexural Strength (ASTM C580)	>40.0 N/mm ²
Tensile Strength (BS 6319, part 7)	>18.0 N/mm ²
Water Absorption	<0.2%
Initial Hardness @25°C	24 hours
Full Cure @25°C	7 days
Chemical Resistance	Excellent

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Coverage:

2.10 kg of LAVAPOXY HS achieves 1.0 square meter @ 1.1 mm thickness.

*Coverage rate is an approximate value, and subject to actual site conditions.

Packaging:

LAVAPOXY HS is supplied in 8 kg three part kit of two metal containers and a bag for part C.

Shelf Life:

LAVAPOXY HS can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

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Cleaning:

Clean tools and equipment with ARMOSOLVENT prior to product hardening. Hardened material can only be removed mechanically.

Remarks:

- Do not apply where ambient temperatures are below 5°C.
- Partial mixing of the product components should not be allowed under any conditions.
- Extra care should be taken when applying at high temperature as pot life of the mixed product will shorten dramatically.
- It is recommended to shade the working area while mixing and placing LAVAPOXY HS. Used tools should be kept in shade.

Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapor or spray mist.

FIRST AID:

Eyes:	In the event of accidental splashes, flush with warm water and seek medical advice.
Skin:	Wash skin thoroughly with soap and water
Inhalation:	Remove to fresh air, keep patient rested
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to LAVAPOXY HS Material Safety Data Sheet.

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