

ShaliCem[®] Abra

Hydraulic Abrasion Resistant Mortar



STP Limited

Description

ShaliCem[®] Abra is single component, cement based protective mortar with high resistance to hydraulic abrasion.

Characteristics

Colour	Grey	Density, kg / L	2.25		
Thickness, mm	10	Grading, D _{max} , mm	2.6		
		Shrinkage, mm / m	0.9 ± 0.01		
• Minimum	50	Working life @ 23 °C, minutes	20 - 25		
• Maximum					
Flexural strength, N/mm ²	6	Compressive strength, N/mm ²	30		
				• 1 day	
				• 2 days	45
				• 7 days	65
				• 28 days	85
Abrasion Resistance, % Wt loss ASTM 131	3.5 – 4.5	Theoretical coverage*, Kg / m ² / 10 mm thickness	21		
Substrate temperature, °C	5 to 30	Ambient temperature, °C	5 to 30		

Application

- **ShaliCem[®] Abra** is particularly suitable for use as:
 - Abrasion-resistant protective mortar layer for concrete / natural stone / other mortar surfaces.
 - Restoration work.
 - Repair of spalling and damaged concrete in for infrastructure and superstructure works especially in zones where high abrasion resistance is required.
 - For structural strengthening.
 - Increasing the bearing capacity of the concrete structure by adding mortar.
 - For preserving or restoring passivity. Increasing cover with additional mortar and replacing contaminated or carbonated concrete.
- **ShaliCem[®] Abra** protects and repairs hydraulic structures subjected to hydraulic abrasion and aggressive water (pH >4):
 - Sewage pipes and plants.
 - Dam / Maritime structures.
- **ShaliCem[®] Abra** is also suitable for protecting and repairing structures subjected to heavy abrasion, or mechanical loads:
 - Storage or loading bays.
 - Silos floor.
 - Industrial floor.

Advantages

- High abrasion resistance (A6 classification).
- High hydraulic abrasion resistance.
- Can be applied up to 50 mm thick per application layer.
- Tested as repair in concrete sewerage pipes.
- Sulphate resistance.
- Structural repair.
- Good workability.
- Suitable for hand and machine application (dry spray technique).
- A1 fire rating.

Application Methodology

➤ Surface Preparation

- Prepare the surface by abrasive blast cleaning technique or high-pressure water blasting.
- Remove all loose gravel, dirt, oil, grease and foreign matter by jet of dry air and clean the surface mechanically or by grinding to make it smooth before application.
- Ensure that the relevant surface is structurally sound and firm.

➤ Priming

- STP recommends priming of the surface by ShaliPrime S. Priming is a must when **ShaliCem® Abra** is applied manually.
- Priming may be optional on a well prepared roughened firm surface when **ShaliCem® Abra** is mechanically applied. In such cases, ensure that the surface is pre-wet and that **ShaliCem® Abra** is applied in pre-wet condition.

➤ Material Preparation

- Add entire quantity of Powder into 2.8 L of water and mix by a slow speed mixture (approx. 500 rpm) fitted with a suitable mixing paddle.
- Stir for at least 3 minutes to ensure a homogenous mix.
- After stirring, wait for the product to settle in order to let entrapped air escape.

➤ Application of Material

- Apply **ShaliCem® Abra** on the primed surface
- Finish, for both hand and machine application, by the relevant roughcast as soon as the mortar has started to stiffen. Finish with wooden, rubber or Styrofoam float.
- In case of requirement of a smooth finish on floor application, smoothing can be done with mechanical float 2 to 3 hours after placing the mortar.
- If the application thickness exceeds the maximum allowable layer thickness, build up construction equal layer thicknesses. The first layer shall be rough and be hardened before applying any subsequent layers.

Cleaning & Maintenance

Clean tools and equipment with solvent such as Xylene.

Health & Safety

- Avoid contact with skin / eyes and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapor.
- Wear suitable protective clothing, gloves and eye protection.
- In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of contact with eyes, wash immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately. Do not induce vomiting.

Packing

Available in 30 Kg container.

Storage

Store in cool dry place, under the shed, away from heat.

Shelf Life

6 months in original unopened sealed conditions.



STP Limited
Enhancing Structures' Life

Product Range

- Waterproofing and Insulation ■ Road Surfacing
- Sealants and Additives ■ Pipeline Coating
- Protective / Anti-Corrosive Coating ■ Epoxy Flooring
- Grouts / Admixtures ■ RestoFix- Repair / Rehabilitation
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