

COSTARFLO 600 EMS

High performance epoxy resin-based mortar screed for industrial flooring applications



PRODUCT DESCRIPTION

Costaflor 600 EMS is a three-component solvent free heavy duty non-shrink epoxy resin-based mortar for patching and screeding industrial floors. It is designed for application or thickness ranging from thickness of 3-10 mm and above. It is used where heavy duty flooring is required with mechanical and general chemical resistance.

ADVANTAGES

- Excellent mechanical resistance with high compressive and flexural strength.
- Non-slip surface for safe vehicular and pedestrian traffic.
- Excellent general chemical resistance against solutions of acid, alkali, salts, oils, fuels and solvents.
- Durable with long service life and easy maintenance.
- Excellent resistance to abrasion and intense traffic.
- High bonding strength with substrate.
- Minimal disruption due to thickness causing little interference with existing levels.

AREA OF USES

Costarflo 600 EMS is used for industrial flooring and walls requiring resistance to heavy mechanical/chemical wear, ease of cleaning and hygiene such as:

- Hospitals
- Warehouse and factory floors.
- Food and beverage industries/breweries
- Heavy engineering industrial floors
- Areas where heavy forklifts and corrosive chemicals are of concern
- Machine shops and workshops
- Chemical plants
- Water treatment plants
- Storage areas

- Plant rooms
- Pharmaceutical plants
- Steel works

PROPERTIES

Surface Preparation: The surface of the concrete should be sound, clean and uncontaminated. This preparation requires a sound exposed concrete surface free from dust, loose particles and any deleterious matter. The concrete substrates must be of sufficient compressive strength (minimum 25N/mm²) with a minimum pull off strength of 1.5 N/mm².

- New concrete surfaces must be properly cured and have moisture content not exceeding 5% before application commences.
- For defective surfaces or surfaces with laitance, it must be cut back to a sound base. Excess laitance deposits are best removed by light mechanical scrubbing, grinding or grit/captive blasting followed by vacuum cleaning to remove dust debris.
- Cracks on old concrete surfaces should be treated with Costar Repair Mortar 20, a solvent free epoxy resin repair mortar. Expansion joints shall be repaired using Costar Epoxy Repair Mortar, a high strength solvent free epoxy mortar.
- Steel surfaces should be degreased and grit blasted to SA2½ immediately prior to application.

Priming

All surfaces must be primed with Costarflo 500, high performance solvent free epoxy primer designed for maximum absorption and adhesion to concrete substrates.

The primer should be applied by brush or roller on to the cleaned surface area (particularly hidden surfaces) at a rate of 3-6 m²/Liter.

A second coat of primer may be required if the substrate is excessively porous because the primer will be absorbed very quickly leaving characteristic light colored dry patches.



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Mixing

Prior to mixing, stir Part A (resin base) mechanically. Pour the entire color pack into Part A (resin base) container and mix for 15-30 seconds. Add the entire contents of Part B (hardener) into the mix and stir further for 30 seconds. Gradually empty Part C (filler) into the mix of base, color pack and hardener and continue mechanical mixing, using a suitable mixing paddle fitted to a slow speed forced action mixer further for 2-3 minutes, until a uniform and homogenous lump free material is achieved. Scrape the side and bottom of the container while mixing. It is recommended that the kits, not be used partially. Mixing should be carried out using a force action mixer or a heavy duty, slow speed drill fitted with a

mixing paddle. Once mixed, the material must be used within its pot life.

Application

The mixed Costarflo 600 EMS should be discharged on the floor when the primer is still in a tacky condition. Spread using either a garden rake or the edge of a wooden/plastic trowel to get a uniform thickness. After a short waiting time, the material should be compacted with a wooden float to ensure complete compaction and closed/finished with a stainless steel trowel. Screeding rods are useful to maintain a minimum compacted thickness of 5mm. Particular attention should be given to areas around obstruction and protrusion making sure that all surfaces are covered.

TECHNICAL PROPERTIES

Packaging	Component A	Component B	Component C	Total set
	Resin	Hardener	Filler	paste
	1.5kg	0.6kg	11kg	13.1kg
Density	2.10 kg/L			
Surface	smooth			
Compressive strength	>78N/mm ²			
Flexural strength	>30 N/mm ²			
Bonding to concrete	2.6 N/mm ² (Exceeds concrete cohesion)			
Processing time	± 45 minutes.			
Walk-able time	after 24 hour			
Fire class	BFL S1 EN 13501 Euro norm			
Full mechanical load	after 4 days			
Heat resistance	55 °C			
Layer thickness	1-2mm			
Curing	Shrink-free			
Abrasion resistance	= AR0,5			
Impact resistance	= IR10			

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Cleaning

Tools and equipment should be cleaned with appropriate cleaning agents immediately after use. Remove uncured Costarflo 600 EMS using a suitable thinner (Xylene / MEK / Acetone). Harden material should be removed mechanically. Spillages should be absorbed with sand or sawdust and disposed of in accordance with local regulations.

Technical/Specification

Costar offers a wide range of quality chemicals. Costar also offers technical/specification support service to specifiers, end users, architects, quantity surveyors and contractors. On-site technical support is also provided by a team of professionals from Costar.

Coverage/Yield:

Primer: Costarflo 500 - Minimum 0.2 kg/m²

Epoxy Mortar Screed: Costarflo 600EMS – Theoretically 2kg/m²/mm per 1mm thickness. Further coverage guidance (2.5m² / pack at 5mm thickness)

SELF LIFE

Shelf life is 12 months provided the temperature is kept within the range of 5°C to 50°C.

STANDARD COMPLIANCE

Conforms to the requirement of EN 13813

HEALTH & SAFETY

Costarflo 600 EMS and Costarflo 500 should not come in contact with skin and eyes or be swallowed. Some people are sensitive to epoxy resins and hardeners. Gloves, goggles and a barrier cream should be used.

Ensure adequate ventilation and if working in enclosed areas, use suitable breathing apparatus. If mixed resin comes into contact with the skin, it must be removed before it hardens with a resin removing cream, followed by washing with soap and water. Do not use solvent. Should accidental eye contamination occur with any of the above products, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

ADDITIONAL INFORMATION

Costarchem manufactures a complete range of construction chemical products which include:

- Concrete admixtures
- Waterproofing system
- Flooring system
- Cementitious and epoxy precision grouts
- Damp-proofing products
- Sealants and adhesives
- Repair and refurbishment systems

For more information on any of our products, please contact Costarchem global or regional office.

LEGAL NOTE

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