



The Chemical Company

EMACO® S55

Cement - Based Grout

Description of Product

EMACO® S55 is cement based one component, polymer modified, and self compacting non-shrink grout.

- Fixing of the industrial machines on the foundations,
- Fixing of the steel columns on the RC foundations,
- Filling of the voids in the jacketing applications.

Fields of Application

- Construction of shear wall caps and column caps,
- Fixing of pre - cast concrete elements,
- Fixing of the turbines on the foundations,
- Fixing of the generators, compressors and pumps on the foundations,

Features and Benefits

- Mixed with only water and can be applied easily.
- High compressive strength.
- High fluid consistency.
- Free of bleeding.
- Resistant to water and weather conditions.
- Perfect bonding to the concrete and steel.
- Water proof.
- Non-Shrink.

Technical Data

Product Chemistry	Mineral fillers and polymer modified cement	
Colour	Grey	
Compressive Strength (TS EN 196)	1 day	> 30 N/mm ²
	7 days	> 50 N/mm ²
	28 days	> 60 N/mm ²
Flexural Strength (TS EN 196)	> 8 N/mm ² (28 days)	
Bonding Strength	To concrete	> 2 N/mm ² (28 days)
	To steel	> 2 N/mm ² (28 days)
Elasticity Modulus	> 20,000 N/mm ² (28 days)	MK
Capillary Water Absorbstion (TS EN 13057)	≤ 0,5 kg. m ⁻² . hour ^{-0.5}	
Application Thickness	Min.	10 mm
	Max.	40 mm
Application Temperature	+5°C - +30°C	
Service Temperature	-20°C - +400°C	
Pot Life	45 minutes (20°C)	
Open Time to Pedestrian Traffic	24 hours (+20°C)	
Fully Cured	28 days (20°C)	

Typical values are obtained from the test results of 4x4x16 mortar prism in 23°C and 50% relative humidity conditions. High temperatures shortens the curing and working time, lower temperatures extends the durations.



EMACO® S55

Application Procedure

Preparation of Machine and Foundation

The concrete should be free of frost, curing membranes, waterproofing treatments, oil stains, laitance, friable material and dust. The concrete surfaces should be chipped and if there is a water leakage it must be drained or properly plugged. Base plate, rods and bolts should be free of oil stains, grease and dust. Enough number of holes should be opened on the base plate for air drain. Machine should be assembled and balanced before grouting. The concrete surfaces should be saturated with water at least 6 hours before the grouting.

Formwork Preparation

The form material should be waterproof and resistant to hydrostatic forces of the grout. Formwork installation should be done against the possible leakage of the cement paste. An opening should be designed in the formwork with a width of 5 cm at minimum for pouring the grout. For providing a constant pressure for easy compacting of the grout the forms should be as high as possible in the pouring side. In grouting of huge base plates, special pipe and pump systems can be used or grout can be prepared with 5% extra water. For preventing the pressure releases, the forms should be placed without any tolerances and gaps between the concrete and form material.

Mixing

Add enough water into a clean mixing bucket by using a proper water gauge. Add the powder into the bucket slowly and continuously. Mix the fresh mortar with a proper electrical mixer (300-600 rpm) for 4 minutes until having a homogenous consistency. Let the mortar have rest for 4 minutes and re-mix for 30 seconds.

Mixing Ratios

EMACO® S55	1 kg powder	25 kg bag
Water Quantity	< 0,16 liter	< 4,00 liter
Mixed Density	~2,20 kg/liter	

Application Method

In the case of operating neighbour machines, a glass of water should be put on the groutin base and the vibrations caused by the environment can be observed. If needed, surrounding machines should be swith off until (10 - 10 hours in 20°C) the grout sets.

EMACO® S55 should be poured directly into the formwork or it should be pumped under pressure.

Application thickness should be 1 - 4 cm. For preventing the possible air gaps in the formwork, pour the grout from single opening and let the air draining. For thicker applications second layer of the mortar should be applied in same way or consult to the BASF Yapı Kimyasalları San. A.S. technical service for thicker applications. Open areas should be protected from the rain, wind, etc. aggressive whether conditions during the first 24 - 48 hours after finishing repair by using wet clothes, curing membranes etc.

Coverage

19 kg/m² for obtaining 1cm thick layer.

Watchpoints

- During the application the substrate and environment temperature should be between 5-30°C.
- Open areas should be protected from the rain, wind, etc. aggressive whether conditions during the first 24-48 hours after finishing repair.
- Cement based materials' pot life and curing times vary depending on the relative humidity, substrate and environment temperature.

EMACO® S55

Reaction gets slow in low temperatures and it causes to extension on pot life and working time. On the other hand high temperatures speed up the reaction, which results to short pot life and working time. For full curing of material, both the substrate and environment temperature shouldn't be under allowed application temperature.

- Do not use **EMACO® S55** in case of contacting to liquids with a PH under 5.5.
- Do not use vibrator for placing the mortar.
- In low temperatures (5°C - 10°C) the following precautions should be taken;
- The product should be stored in warm conditions,
- Hot water (30°C - 50°C) should be used for mixing,
- Grouting area should be heated and protected from cold.
- In high temperatures (25°C - 30°C) the following precautions should be taken;
- The product should be stored in cool conditions,
- Cold water (0°C - 10°C) and ice should be used for mixing,

Cleaning of Tools

After the application all tools should be cleaned with water. **EMACO® S55** can be cleaned with only mechanical abrasion after hardening.

Packaging

25 kg bag.

Storage

Store in original container in cool (+5°C - +25°C) and dry indoor conditions.

Shelf Life

12 months under proper storage conditions after production date.

Health and Safety Precautions

It is dangerous to get close to the store areas with fire. The store must be well ventilated. Work clothes, protective gloves, glasses and mask defined in Labour Laws must be used during the application. Avoid from material to contact with skin and eyes. In case of contacting wash your skin with water and go to doctor immediately

Don't bring any food and drink to the application area. Store the material away from the children. For further information Material Safety Data Sheets should be read.

Disclaimer

This information and all further technical advice are based on our present knowledge and experience. BASF Yapı Kimyasalları San. A.S. is only responsible for product's quality. The results, caused by wrong application and/or application methods and fields exception of technical advices on the application of the product in this technical data sheet, implies no liability or any other legal responsibility on BASF Yapı Kimyasalları San. A.S.

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