MasterFlux® 928

Cementitious High Strength Non-Shrink Precision Grout

Material Description

MasterFlux® 928 is cement based one part, self compacting non-shrink grout.

Complies with EN 1504-6 and EN 1504-3/R4

Areas 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
- 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

Characteristics 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
- Non-shrink

Processing Method

(A) Preparation of Substrate

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

Technical Properties	
Structure of the Material	Minerals Fillers and Cement
Color	Grey
Compressive Strength (TS EN 196) 1 days 7 days 28 days	 >30 N/mm^2 >50 N/mm^2 >60 N/mm^2
*Flexural Strength (TS EN 196) (28 days)	>8,0 N/mm^2
Bonding Strength (TS EN 1542) (28 days) To Concrete To Stell	 >2,0 N/mm^2 >2,0 N/mm^2
Elastise Modülü (TS EN 13412) (28 days)	>20000 N/mm^2
Capillary Water Absorption (TS EN 13057)	<0,5 kg. m^{-2} h$^{-0,5}$
Aplication Thickness	Min. 10 mm Max. 80 mm
Aplication Temperature	+5°C +30°C
Service Temperature	-20°C +400°C
Pot Life (+20°C)	45 min.
Open Time to Pedastrian Traffic	24 hours
Fully Cured (+20°C)	28 days

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

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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.

(B) Mixing

Add enough water into a clean mixing bucket by using a proper water gauge. Add the powder into the bucket slowly and continously. Mix the fresh mortar with a proper electrical mixer (400 - 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 Ratio

MasterFlux® 928	1 kg Powder	25 kg Bag
Quantity of Mixing Water	< 0,16 liter	< 4,00 liter
Mixture Density	~2,20 kg/lt	

(C) Processing

In the case of operating neigbour machines, a glass of water should be put on the grouting base and the vibrations caused by the environment can be observed. If needed, surrounding machines should be swicthed off until (10 - 12 hours in 20°C) the grout sets.

MasterFlux® 928 should be poured directly into the formwork or it should be pumped under pressure. Application thickness should be 8 cm. For preventing the possible air gaps in the formwork, pour the grout from single opening and let the air draining. Use a steel hook for placing the grout under the plates and do not use vibrator. For thicker applications MBT Tech Technical Service.

Consumption

19.00 kg/m² for obtaining 10 mm thick layer

Point to Consider

- During the application the substrate and ambient 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 ambient temperature. 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 ambient temperature shouldn't be under allowed application temperature.
- Do not use MasterFlux® 928 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.

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Cleaning of Tools

All the tools and equipments must be cleaned by solvent after the application. After MasterFlux® 928 is hardened, it can only be removed from the surface mechanically.

Packaging

MasterFlux® 928 is available in 25 kg polyethylene reinforced kraft bag.

Shelf Life

12 months after the production date under appropriate storing conditions.Opened packages have to be stored by tightly sealing the bag/cover and must be used in one week.

Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş. is only responsible for the quality of the product MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş. is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

Contact

MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş.
Eyüp Sultan Mah. Sekmen Cad. Hayy 1000A No:26/8
Sancaktepe, İstanbul
Tel: 0216 561 35 45 www.mbt-tech.tr

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MBT TEKNİK YAPI KİMYASALLARI SAN. VE TİC. A.Ş.

Eyüp Sultan Mah. Sekmen Cad. HAYY 1000A No:26 K:5 D:8, 34885 Sancaktepe, İstanbul, Türkiye

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DOP NO 2103007

2184-CPR-0462

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TS EN 1504-3
Yapısal Tamir (Structural Repair Mortar) R4

3.1 Elle harç uygulaması / *Concrete restoration by applying mortar by hand*
3.2 (Yeniden Beton Dökülmesi / *Concrete restoration by recasting with concrete*
4.4 Harç ve Beton İlavesi / *Structural strengthening by adding mortar or concrete*
7.2 Bozunmuş Betonun Yenilenmesi / *Replacing contaminated or carbonated concrete*

Basınç Dayanımı (Compressive Strength)	≥ 45 N/mm^2
Klorür içeriği (Chloride ion Content)	≤ % 0,05
Adezyon Dayanımı (Adhesive Bond)	≥ 2,0 N/mm^2
Kontrollü Büzülme / Genleşme (Restrained Shrinkage/Expansion)	≥ 2,0 N/mm^2
Karbonatlaşma Direnci (Carbonation Resistance)	Geçer/*Pass*
Elastisite Modülü (Elastic Modulus)	≥ 20 Gpa
Yangına tepki (Reaction to fire)	A1
Tehlikeli maddeler (Dangerous substances)	Madde 5.4'e uygun (Comply with clause 5.4)

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MBT TEKNİK YAPI KİMYASALLARI SAN. VE TİC. A.Ş.

Eyüp Sultan Mah. Sekmen Cad. HAYY 1000A No:26 K:5 D:8, 34885 Sancaktepe, İstanbul, Türkiye

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DOP NO 2106001

2184-CPR-0453

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TS EN 1504-6
Çelik Donatı Çubuğunun Ankrajlanması
(Anchoring of reinforcing steel bar)

Çekip Çıkma Dayanımı : 75kN yük etkisiyle yerdeğiştirme (Pull out strength displacement: at load of 75kN)	≤ 0,6 mm
Klorür İçeriği (Chloride ion Content)	≤ % 0,05
Yangına karşı tepki (Reaction to fire)	A1
Tehlikeli maddeler (Dangerous substances)	Madde 5.3 'e uygun (Comply with clause 5.3)