DRIZORO® Construction Products

# MAXFLOW® 500

CE

## ONE-COMPONENT, SELF-LEVELLING FLOOR MORTAR WITH HIGH ABRASION RESISTANCE FOR REPAIRING CONCRETE PAVEMENTS

### DESCRIPTION

***MAXFLOW® 500*** is a one-component self-levelling mortar, composed of polymer-modified cement, selected aggregates and metallic fibres, ready to be mixed only with water.

***MAXFLOW® 500*** provides an extraordinary fluidity and it is specially designed for repair, levelling and finishing concrete pavements, indoor or outdoor uses, which require a levelling layer with very high abrasion resistance in thickness between 3 and 8mm.

### APPLICATION FIELDS

- Industrial floors and warehouses exposed to wearing which need a new finish with high abrasion resistance.
- Repair and levelling concrete pavements resistant to traffic wheel in parking areas, decks, hangars, etc.
- Restoration of concrete pavements damaged by freeze/thaw cycles and de-icing salts in sidewalks, causeways, squares, etc.

### ADVANTAGES

- Fast curing, allows pedestrian traffic in 8 hours, light traffic in 24 hours and full service heavy traffic in 72 hours.
- High mechanical, abrasion and impact resistance.
- High resistance to UV-rays, humidity, freeze-thaw cycles and de-icing salts. Suitable for outdoor applications.
- High fluidity and levelling properties, no trowelling required.
- Easy application, only needs water for mixing and can be pumped.
- Environmentally friendly: non-toxic, cement-based and solvent-free product.

### APPLICATION INSTRUCTIONS

**Surface preparation**

Surface must be structurally sound, firm, without cement laitance and as uniform as possible, and preferably with a slight roughness, i.e. open textured surface. Minimum bond strength of substrate must be above 1 N/mm$^2$. It must be clean and free of paints, coatings, efflorescence, loose particles, grease, oils, curing agents, form release agents, dust, gypsum plasters, organic growth or any other contaminants that may affect adhesion.

For cleaning and surface preparation, preferably in case of smooth and/or poorly absorbent substrates, use sand blasting or high pressure water cleaning methods, not being desirable aggressive mechanical or chemical means.

All voids, holes, honeycombs, static cracks without movement or any others defects deeper than 8 mm, once opened and routed must be repaired with patching mortar ***MAXROAD®*** (Technical Bulletin No. 27).

**Priming**

Prime surface with ***MAXPRIMER® FLOOR*** (Technical Bulletin No. 230) for best adhesion and prevent air bubbles on surface. Dilute 1 part of ***MAXPRIMER® FLOOR*** with 3 parts of water, and then apply a homogeneous and continuous coat by brush or broom without leaving any puddles. Estimated consumption of the dilution is 0,2 - 0,25 kg/m$^2$ per coat. On very porous surfaces, two or three successive coats may be required, with a drying time between coats of 10-15 minutes at 20 ºC. Allow ***MAXPRIMER® FLOOR*** dry to touch before applying the self-levelling mortar, 3-4 hours at 20 ºC depending on temperature, relative humidity and ventilation conditions.

With low temperatures, high humidity or poor ventilation, the drying time can be increased up to the next day after application. Do not allow more than 24 hours before applying the cement-based mortar.

**Mixing**
A 25 kg bag of ***MAXFLOW® 500*** is mixed with 4,8 to 5 litres (19,2–20 %) of clean water, depending on the ambient conditions and the consistency required.
Pour the water in a clean container and then slowly add ***MAXFLOW® 500*** and mix, by using a slow speed drill (400-600 rpm) fitted with a disc mixer for about 2-3 minutes, until achieving a smooth, lump-free and homogeneous mortar. Small quantities of product can also be mixed by hand.

Do not mix for prolonged period nor use high-speed mixer, which may introduce air bubbles. Allow the mixture to rest for 3 minutes to fully wet out all the powder, and remix briefly again before applying.

For applications by pumping means, ensure to keep a same and continuous water ratio.

**Application**
Place and spread ***MAXFLOW® 500*** with a rubber squeegee in a single step with thickness between 3 to 8 mm. Before ***MAXFLOW® 500*** begins to set, from 20 to 30 minutes at 20 ºC, use a spiked roller to eliminate possible entrapped air on surface.

In order to achieve thickness higher than 8 mm, pour a next layer of ***MAXFLOW® 500*** when the previous layer can take pedestrian traffic.

Apply in delimited sections in advance that should be finished completely to avoid cold joints in non desired places. Limits of each section should coincide with contraction or concrete joints of pavement.

Twenty four hours after application, sawcut contraction joints on each limit or every 36 $m^2$ maximum if there are not present on concrete base. Isolation joints must be provided on the perimeter between ad-joining parts.

Expansion joints must not be covered by ***MAXFLOW® 500*** and should be sealed with a suitable flexible sealant of ***MAXFLEX®*** range.

**Application conditions**
Do not apply when rain, water contact, condensation, dampness or dew is expected within 24 h after application.

Do not apply with substrate and/or ambient temperature is at or below 5°C, or when temperatures are expected to fall bellow 5 °C within 24 h after application. Do not apply to frozen or frost-covered surfaces. Do not apply with temperature higher than 40 °C.

**Curing conditions**
With hot temperature (>30ºC), windy conditions and/or direct sunlight, protect from quick drying by covering with polyethylene sheeting or damp burlaps. Do not use curing agent nor wet the surface.

Allow ***MAXFLOW® 500*** to cure 8 h, 48 h and 72 h, at 20 ºC and 50% R.H. before pedestrian traffic, light traffic and heavy traffic, respectively. Lower temperature and/or higher R.H. increase the curing time.

**Cleaning**
All mixing and application tools must be cleaned immediately with water after use. Once product hardens, it can only be removed by mechanical means.

## CONSUMPTION

Estimated consumption of ***MAXFLOW® 500*** is 1,7 kg/$m^2$ per mm thickness.

These figures are for guidance only and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on-site to ascertain the total consumption exactly.

## IMPORTANT INDICATIONS

- Do not apply on substrates vitrified or enamelled, or treated with water repellent agents. Do not apply on bituminous materials, metals, wood, plasters or paints.
- Do not apply over unsound or weak substrates.
- Allow new concrete and mortars a curing time of 28 days before application.
- Do not add cements, additives, aggregates or other compounds.
- Do not exceed the recommended mixing water ratio.
- Do not use leftovers from previous mixes.
- Different mixing ratios, substrate absorption, application and curing conditions may produce differences of colour intensity.
- To restore the workability, remix the mortar but never add more water.
- Observe the minimum and maximum recommended thickness per layer.
- For other uses not specified on this Technical Bulletin or further information, consult the Technical Department.

## PACKAGING

***MAXFLOW® 500*** is supplied in 25 kg bags. It is available in grey, pearl grey, red and green colour.

## STORAGE

Twelve months in its unopened original packaging. Store in a cool, dry and covered place, protected from moisture, freezing and direct sunlight, at temperatures above 5 ºC.

## SAFETY AND HEALTH

***MAXFLOW® 500*** is not a toxic product but is an abrasive composition. Avoid direct contact with skin and eyes, and breathing dust. Use rubber gloves and safety goggles when handling, mixing and applying the product. In case of skin contact, wash affected area with soap and water. In case of eye contact, rinse immediately thoroughly with clean water but do not rub. If the irritation persists, seek medical assistance.

Consult the Material Safety Data Sheet for ***MAXFLOW® 500.***

Disposal of the product and its packaging should be carried out according to the current official regulations and it is the responsibility of the final user of the product.

## TECHNICAL DATA

| **Product characteristics** | |
|---|---|
| *CE Marking, UNE-EN 13813*<br>Description: Polymer modified and fibre cementitous screed material. EN 13813 CT-C35-F7-A6<br>Uses: Wearing surface for interior and exterior applications | |
| General appearance and colour | Grey powder |
| Mixing ratio, (%, by weight) | 19,2 - 20,0 |
| Slump in 5cmx3cm cylinder, (mm) | 140 |
| **Application and curing conditions** | |
| Minimum application temperature (ºC) | > 5 |
| Pot life at 20ºC, (min) | 30 – 45 |
| Initial / Final setting time at 20 °C, (h) | 1,5 – 2,5 / 2,5 – 4,5 |
| Curing time for pedestrian traffic/ light traffic / heavy traffic, at 20 ºC & 50% H.R.(h) | 8/ 48 / 72 |
| **Cured product characteristics** | |
| Density for cured and dry product, ($g/cm^3$) | 2,00 ± 0,10 |
| Compressive strength at 7/28 days, EN 13892-2 ($N/mm^2$) | 29,2 / 39,5 – C35 |
| Flexural strength at 7/28 days, EN 13892-2 ($N/mm^2$) | 6,0 / 10,5 – F7 |
| Wear resistance Böhme, EN 13892-3 ($cm^3/50\ cm^2$) | 4,7 – A6 |
| Surface hardness, EN 13892-6 ($N/mm^2$) | 72,3 – SH 70 |
| Elastic modulus, ISO 178 ($kN/mm^2$) | 6,4 |
| Impact resistance and height for first cracks, EN ISO 6272 (N·m – mm) | IR 4,91 - 500 |
| Adhesion on concrete at 28 days, EN 13892-8 ($N/mm^2$) | 1,79 |
| Release of corrosive substances | CT |
| Reaction to fire, EN 13501-1 (Euroclass) | A1 |
| **Thickness / Consumption*** | |
| Thickness per layer (mm) | 3 – 8 |
| Consumption ($kg/m^2$ per mm thickness) | 1,7 |

* These figures are for guidance only and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on-site to ascertain the total consumption exactly.

## GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. ***DRIZORO®, S.A.U.*** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.

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