DRIZORO® Construction Products

MAXPATCH®-M

ONE-COMPONENT, PATCHING MORTAR FOR REPAIRING CONCRETE FLOORS AND CONTINUOUS DECORATIVE FINISH IN MINIMUM THICKNESS

EPD® CE
ENVIRONMENTAL PRODUCT DECLARATION

DESCRIPTION

MAXPATCH® -M is a one-component mortar based on special cements, well-graded aggregates and additives. Once mixed, provide an advanced mortar with high performance and mechanical properties (adhesion, abrasion resistance and compressive strength) suitable for restoration and patching of concrete floors, ramps, steps, etc, subject to pedestrian or heavy vehicular traffic. It is also available for a continuous decorative and aesthetic finish, without joints, the type ***MAXPATCH® -M FINO*** with smaller aggregate size, to be used in thickness layer from 1 to 5 mm, on previously levelled substrates with ***MAXPATCH® -M.***

APPLICATION FIELDS

- Restoration of paving and concrete floors, roads, loading areas and surfaces subjected to high wear in warehouses, parking garages, truck docks, hangars, industrial facilities, etc.
- Patching of horizontal surfaces to be levelled or lifted.
- Repair and finish of non-slip ramps with high resistance to traffic wear.
- Restoration of concrete steps and stairs.

ADVANTAGES

- Rapid return to service for light traffic and heavy traffic after 24 hours and 5 days respectively.
- Allows layers from 5 to 25 mm thickness.
- High mechanical strengths and wear-resistance.
- Good adhesion to concrete.
- Suitable for filling of voids or holes in floors.
- Allows an anti-slip finishing
- Also available in white, red and green colour.
- Easy to use and good workability.

APPLICATION INSTRUCTIONS

Surface preparation

Remove all disintegrated or unsound concrete until achieve a structurally resistant substrate. Square cut or undercut the perimeter of the area to be patched to a depth of at least 5 mm. Avoid small or sharp angles in the edge of the patch. For repairing expansion joints, edge joints must be cut at least 30 mm of deep.

Surface must be thoroughly cleaned, free of dust, dirt, coatings, cement slurries, oil, grease or any other foreign material that could affect the adhesion. Use water blasting or equivalent mechanical means to clean concrete and provide an open textured surface.

Before applying ***MAXPATCH® -M,*** saturate with water the surface to be repaired but avoid free standing water, and start applying the product once the surface has taken on a matt finish. If it dries out, saturate it with water again.

Mixing

MAXPATCH® -M is supplied ready to be mix with clean water. Pour 3,5-4,0 litres of water (14-16 %, by weight) into a clean container per each 25 kg bag. Mix mechanically using a slow speed drill (400-600 rpm) during 2-3 minutes until achieving a homogeneous product in colour and appearance, free from lumps and air bubbles, and of a semi-dry consistency. Small quantities of product can also be mixed by hand. After leaving it to rest for 1-2 minutes, mix briefly for a few seconds and then start applying it.

Do not mix for prolonged period nor use high-speed mixer. Only mix quantities that can be placed until 20 minutes. After this period, setting process starts and mortar reduces its workability. If necessary, mix the mixture again to maintain its workability, but do not add any more water.

Application

For an optimum adhesion prepare a bonding slurry, mixing 5 parts of powder with 1 part of water, and apply it on surface using a brush or broom such as ***MAXBRUSH®*** or ***MAXBROOM®,*** filling all voids and pores.

Patches less than 25 mm thickness.
Once the bonding slurry loses its bright, immediately place ***MAXPATCH® -M*** on the bottom and sides of patch using a trowel. Observe a maximum thickness per layer of ***MAXPATCH® -M*** until 25 mm. If several layers are required, provide a roughened surface to improve the adhesion of successive layers, i.e. each lift should be scored and allowed to set for 30 minutes before applying the next one.
If the previous bonding slurry or layer sets or hardens, a new slurry must be applied. Before the initial set of the mortar, level and trowel the surface to the desired finish. To provide a non-slip surface use a ***MAXBRUSH®*** brush. Do not overwork surface.

Patches deeper than 25 mm thickness in single layer.
Add 8 kg of clean silica sand, free of fine particle fillers, and with maximum size up to 10 mm, per each 25 kg of ***MAXPATCH® -M***. Mix dry both compounds before adding the water. Add the enough water until achieving a workable consistency mortar but avoiding any excess of mixing water which may cause bleeding or segregation of the fresh mortar.
Once the bonding slurry has lost its brightness, begin applying the mortar as described above. Apply with a trowel or float without pressing too hard against the edges and the base of the area to be repaired, in layers no thicker than 50 mm.

Application Conditions

Do not apply if rain is expected and/or if contact with water, moisture, condensation, dew, etc., is likely within 24 hours of application. The optimum working temperature range is 10°C to 30°C. Do not apply with temperatures below 5°C or if lower temperatures are expected during the following 24 hours. Do not apply on frozen surfaces or with risk of rainfalls within 24 hours.

Ensure to saturate completely with water the surface under high temperature, windy or low humidity conditions. Avoid direct exposure to the sun in extreme heat.

Curing
For applications with high temperature, moderate to high winds or low humidity conditions, i.e. summertime, begin curing procedures immediately after application, such as with fine mist of water, covering with wet burlap or polyethylene sheet, or by spraying water onto the surface of the mortar, without washing it away.

Allow a minimum curing time of 24 hours, 48 hours and 5 days (20°C and 50 % RH) before subjecting the surface to pedestrian traffic, light vehicle traffic and heavy vehicle traffic, respectively. Lower temperatures and/or higher relative humidity levels will extend the curing time.

Cleaning
Before ***MAXPATCH® -M*** sets, all tools and equipments should be cleaned immediately with water. Once it hardens, can only be removed by mechanical means.

CONSUMPTION

Application of pure product: A 25 kg bag of ***MAXPATCH® -M*** or ***MAXPATCH® - M FINO*** fills a volume of about 12,5 litres. Approximately 2,0 kg/m^2·mm thickness.

Application adding sand: A mixture consisting of 8 kg of sand per 25 kg bag of ***MAXPATCH® -M*** fills a volume of about 20 litres. Approximately 1,4 kg/m^2·mm thickness of ***MAXPATCH® -M***.

These figures may vary depending on substrate conditions and texture. A preliminary test on-site will determine consumption exactly.

IMPORTANT INDICATIONS

- Do not add cements or additives that may affect the product's properties.
- Use the recommended amount of water when mixing.
- Do not excess the maximum thickness and consumption recommended per layer.
- To restore the workability of the material, re-mix it, but under no circumstances add any more water. Do not mix more material than can be applied within 20 minutes.
- Do not use leftovers from previous mixes to make a new mixture.
- Do not apply to water-repellent surfaces, bituminous materials, plaster, paint and/or metal surfaces.
- For further information and other uses not specified in this Technical Bulletin, consult our Technical Department.

PACKAGING

MAXPATCH® -M and ***MAXPATCH® -M FINO*** are supplied in 25 kg bag in the following colours: dark grey, medium grey, pearl grey, anthracite, Dakota grey, grey, white and ivory.

STORAGE

Twelve months in its original unopened packaging, in a dry and covered place protected from frost, humidity and direct sunlight, with temperatures above 5°C.

SAFETY AND HEALTH

MAXPATCH® -M is non-toxic but it is an abrasive product. Protective rubber gloves and safety goggles must be used to mix and apply. In case of eye contact, rinse thoroughly with clean water for at least 15 min, but do not rub. In case of skin contact, wash affected areas with soap and water. If irritation continues, seek medical attention.

For further information, Safety Data Sheet of ***MAXPATCH® -M*** is available by request.

Disposal of the product and its empty packaging must be made by the final user and according to official regulations.

TECHNICAL DATA

Characteristics of the product		
CE Marking, EN 1504-3 Description. Polymer hydraulic cement mortar (PCC) for non-structural repair of concrete. Uses: Building and civil engineering works. Principles / Methods. Concrete restoration by applying mortar by hand (Principle 3-CR / 3.1)		
Appearance of component	Pigmented powder	
Density of powder (g/cm^3)	1,35 ± 0,1	
Density dry mortar (g/cm^3)	2,0 ± 0,1	
Maximum aggregate size (mm)	***MAXPATCH®-M***	***MAXPATCH®-M FINO***
	< 0,8	< 0,4
Mixing ratio (%, by weight)	14 –16	
Application and curing conditions		
Minimum application temperature (°C)	> 5	
Pot life at 20°C & 50 % R.H., (min)	Aprox. 20	
Waiting time between layers at 20°C & 50 % R.H., (min)	> 30	
Curing time at 20°C & 50 % R.H., (d) - Pedestrian traffic - Light traffic - Heavy traffic	 1 2 5	
Characteristics of the cured product		
Requirement for repair products, EN 1504-3 (Class)	R3	
Compressive strength at 28 days, EN 12190 (MPa)	36,27	
Chloride ion content, EN 1015-17 (%, by weight)	0,005	
Adhesive bond on concrete at 28 days, EN 1542 (MPa)	2,2	
Carbonation resistance, EN 13295, d_k (mm)	1,0	
Elastic modulus, EN 13412 (GPa)	17,3	
Thermal compatibility - Part 1: Freeze-thaw, EN 13687-1 (MPa) - Part 2: Thunder shower, EN 13687-2 (MPa) - Part 4: Dry cycling, EN 13687-4 (MPa)	 1,83 1,96 1,73	
Capillary absorption, EN 13057 (kg/m^2·h^{0,5})	0,01	
Consumption* / Thickness		
Minimum - Maximum thickness per layer, pure product (mm) ***MAXPATCH® -M / MAXPATCH®-M FINO***	5-25 / 1-5	
Consumption ***MAXPATCH® -M / MAXPATCH®-M FINO*** for pure product (kg/m^2·mm)	2,0	

* 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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DRIZORO, S.A.U.
C/ Primavera 50-52 Parque Industrial Las Monjas
28850 TORREJON DE ARDOZ – MADRID (SPAIN)
Phone. +34 91 676 66 76 - +34 91 677 61 75
e-mail: info@drizoro.com Web site: drizoro.com