

Product type: Flexible grey mineral enhanced adhesive based on hydraulic binders, with extended open time, limited slip, additional characteristics and enhanced adherence, C.2.TE.S1 class according to SR.EN. 12004/2008.

Short description of product: MARMOflex adhesive is a flexible adhesive mortar made from quartz sand, selected inert materials, Portland cement and specific water-soluble additives.

Areas of application: It is used for fixing ceramic plates, such as: floor tiles, glaze, porcelainized tiles from the AI, Alla, Allb, Alll, Bla, Blb, Blla, Bllb and Blll categories, irrespective of their sizes, mosaics (even those made from natural stones) and for applying natural stones such as: marble, travertine, limestone, granite, both on the inside and on the outside, on any type of base layer, regardless of age, yet compatible with cement (which a product containing cement gets stuck onto) and having a degree of level absorption between 3% and 6%..

Technical data:	Class/type according to SR.EN. 12004/2001	C.2.TE.S1
	Type	flexible
	Use	Inside/outside
	Adherence to the base layer	min. 1.0 N/mm ²
	Adherence to the base layer after frosting/defrosting	min. 1.0 N/mm ²
	Adherence to the base layer after immersion in water	min. 1.0 N/mm ²
	Adherence to the base layer after ageing	min. 1.0 N/mm ²
	Sliding	0,5 mm
	Transverse deformation	4 mm
	Minimum waiting time from mixture preparation to paste application	10 minutes
	Pot life	90 minutes
	Open time	30 minutes
	Maximum period for arranging the plates after application	20 minutes
	Minimum waiting time for jointing fixed plates	24 hours
	Minimum waiting time before the area can be used	36 hours
	Preparation	Only with water
	Mixture water	7 l / 25kg
	Application temperature	+5°C - +35 °C

Consumption values:	Plate sizes	Tooth size of jointer	Average consumption
	Up to 10x10 cm	6 mm	approx. 4 kg/m ²
	From 10x10 to 20x20 cm	8 mm	approx. 5.5 kg/m ²
	From 20x20 to 30x30 cm	10 mm	approx. 6 kg/m ²
	Over 30x30 cm – double application	15 mm	approx. 7 kg/m ²

Instructions for use: Application of product is carried out only by trained and skilled workers in mortar applications, in the following stages:

1. Checking the base surface:

Checking the base layer is an important stage in the process of applying the product. The surfaces upon which MARMOflex is applied should have the following features:

- a. They should be made out of concrete, coating or screed mortars (minimum M50) at least 28 days old.
- b. They should be flat and smooth - uneven elements do not exceed 5 mm/m.
- c. They should be clean, dust and salt free, they should not contain any non-adhesive substances (grease, bitumen, dust, gypsum, dye, old wall painting etc.), with a normal water absorption between 3% and 6%.
- d. They should be free of cracks, Capillary cracks are allowed; they occur due to hydraulic intake, drying and hardening of the base layer. Other cracks caused by incorrect application of the base layer and which are major ($> 0.3-0.5$ mm), moving and which worsen simultaneously with the process of hardening are not allowed, the base layer being unsuitable for the application of plates.
- e. They should be resistant, compact and free of any brittle parts.
- f. They should be dry - the residual humidity, measured at about 2-3 cm inside the base layer on which the product is applied, should not exceed 2%.

If the base layer for which the product is used does not comply with the 6 minimum requirements mentioned above, it is considered to be unfit for the application of ceramic plates with the help of this product.

2. Preparing the product:

The mortar is prepared by mixing a 25 kg powder sack with 7 l (280ml/kg) of clean and cold water, only in clean and appropriate containers. The mixture is prepared with the help of a rotating mechanical device (electrical or pneumatic), with low revolutions (500 rev/min) with a screw guaranteeing a homogeneous mixture.

The powder is poured into the water (and not the other way around) and they are mixed until a homogeneous agglomeration free paste.

After its preparation, the paste is left to rest for about 10 minutes, and then it is mixed again for about 2 minutes. After that, the obtained paste is ready for use.

The non-observance of the mixing stages implicitly causes the product to lose its properties and, thus, failures in using it may occur.

3. Product application:

None of the operations described below shall be performed under direct sunlight, under powerful air currents (wind) or at air or base layer temperatures lower than 5°C or exceeding 35°C.

Before applying the adhesive, the base layer has to be checked. Checking is done according to point 1 „Checking the base surface”.

If the base layer has an absorption of $6 \div 8$ %, MARMOflex adhesive can be used for improving the respective base layer with the help of a primer which is prepared with HIDROFLEX.

If the base layer is older or has an absorption of $1 \div 3$ %, it is necessary to improve the additivity of the MARMOflex adhesive, by replacing 20% of the necessary water with HIDROFLEX.

After checking and eventually preparing the base layer, the adhesive paste obtained according to point 2 is applied with a rectangular indented spatula which creates a grooved and uniform surface. The thickness of the layer is determined by the angle of the jointer when applying the product. The applied layer should be between 5 mm and 7 mm thick.

4. Correct application:

The plates applied on the adhesive paste according to point 3 are slightly pressed by hand and they are lightly hammered with a rubber hammer to eliminate blow holes. Spacers are used for straightening the joints.

While fixing the plates on the spread paste, the maximum intervals for carrying out the operations will be rigorously observed (open time and period for arranging the plates after application). If application takes longer than the mentioned intervals, adherence will be lost.

5. Final recommendations:

- a. For large surfaces, expansion joints are compulsory. They will also be created in the base layer on which the fitting is executed, at distances between 4x4 m and 7x7 m.



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- b. For vertical coverings, all the wall joints will be fitted with expansion joints.
- c. The product is mixed only with clean and cold water and only in clean and appropriate containers.
- d. The product is not applied under direct sunlight, wind, rain or air and base layer temperatures lower than + 5°C or exceeding + 35°C or when such phenomena may occur in the next 24 hours.

Packaging: The product is packaged in sacks weighing 25 kg; 60 sacks per pallet covered in foil.

Storage: The product is stored for maximum 12 months in a dry place, in its original undamaged package, placed on the pallet.

Marking: Each sack is marked by being stamped, on the bottom, with the following information: date of production – five groups of figures symbolizing:
the day, the month, the year ending, production line number, production batch number.

Warranty: The product has a 12 month warranty beginning on the date of production marked on the package; this warranty applies only for the storage conditions mentioned above.

- WARNING**
- The prepared product is alkaline. During handling and transport, goggles, gloves and anti-dust masks should be worn. In case the product gets accidentally into your eyes, wash immediately with lots of clean water and then quickly contact a doctor!
 - Products with damaged packaging should not be used.
 - The unused items should not be discarded into the sewerage system

Note 1: The present data sheet accompanies each invoice or waybill which refers to the product presented in the sheet.

Note 2: It is forbidden to reproduce parts or fragments from the present data sheet.

Note 3: The present data sheet has been drawn up to properly inform the user about the presented product. The use of this sheet for other purpose than informing you about the product and preparing the technological specifications regarding application is strictly forbidden without the written consent of ITAL-KOL.

Note 4: For other additional information, which you consider you should receive or you find useful, we recommend that you contact the producer in writing, before using the product. Any producer liability regarding failures in applying the product resulted from misinterpreting the text of the present data sheet or from verbal consultancy is excluded.

Note 5: The data presented in the product data sheet and, mainly, the instructions regarding the manner and area of application of the product are based on the skills and practical experience of the person applying the product. Due to a large variety of materials, tools or working conditions which we cannot totally control or foresee or which, even if they are clearly mentioned in the product data sheet, are not correctly assessed by the person applying the product, in each case we recommend, before use, to carry out individual tests of applying the product, so that you can be sure that the product the present data sheet is describing is suitable for your respective field of application.

Any producer liability regarding failures in applying the product resulted from the causes mentioned above in this sheet is excluded, except for the event when the damages resulted only from the poor quality of the product that the present data sheet refers to.

Note 6: Depending on the evolution of the technical regulations applicable, the producer preserves the right to modify the present data sheet. For the purpose of confirming the data in the sheet, we recommend you to visit the web page: web www.italkol.ro prior to using the product