

MKD

DUAL-COMPONENT POLYESTER RESIN-BASED ADHESIVE FOR MARBLE, NATURAL STONE, TERRAZZO



Polyester resin adhesives are chemically inert and offer extended durability, feature high- reactivity, rapid hardening, no withdrawal from substrate materials during reticulation and a modest shrinkage during hardening (1 to 6%). This adhesive is the culmination of Federchemicals's extensive knowledge and experience in the use of polyester resins with marble and natural stones. **MKD** is one of the highest products available on the market today because are chosen only very high quality raw materials and are selected only suppliers who confirm strict criteria. This quality control process assures consistency of the physical and mechanical properties of the product. The mineral fillers used in **MKD** adhesives are carefully monitored to ensure purity, inertia, and proper granular dimensions which together form a durable and consistent product. Continuous research and innovation enable the Company Federchemicals to respond to the needs of the market with a wide range of products.

MKD is available in the following formulations: FLUID (F) and VERTICAL/SOLID (V)

PREPARATION For best results, mix 2 to 3% of the catalyst (dibenzoyl peroxide), with the adhesive. The paste formula makes easy to measure. A homogeneous mixing will facilitate uniform catalysis. The catalysis rate is affected by temperature and by the proportion/quantity of catalyst. An excess of hardener/catalyst will increase the hardening speed but weakens the adhesive seal. Surfaces to be treated/glued must be clean and dry; porosity and light roughness of the surfaces favour the best adhesion.

NOTE - To obtain the right colour or shadow of the material to be treated/glued, the proper colouring pastes Base Colore can be used to be mixed to the adhesive. The adhesive that can be coloured is the straw colour (it is the basic formulation of the adhesive). **Never** colour white adhesives. Colouring can weaken adhesive performance. The hardened/cured adhesive is completely workable (grinded, polished, sanded, buffed, etc. after 2 to 5 hours).

TECHNICAL DATA

PHYSICAL STATE	paste (GV),	fluid (GF)
COLOUR	straw, white, black, grey, red, etc.	
DENSITY at 25° C (77 ° F)	2,23 gr./cm ³ (GV),	2,02 gr/cm ³ (GF)
STABILITY	> 12 months in well closed original container, stored in dry place, at temperatures of 15-25 ° C (59-77 ° F)	

MIXING AND USING TIMES HARDENED PASTE MECHANICAL CHARACTERISTICS

		FLUID	VERTICAL
MIXING	minutes	1	1
APPLICATION TIME (POT LIFE)	minutes	1 – 4	1 – 4
GEL TIME (AFTER LIFE)	minutes	5 – 7	5 – 7
SHRINKAGE	%	1,9	1,6
DISTORTION TEMPERATURE (HDT)		> 80° C (176 F)	> 80° C (176 F)
TENSILE STRENGTH (ASTM D638)mPas		45	42
TENSILE ELASTICITY MODULUS mPas		2900	3000
BREAKING ELONGATION	%	2,1	2,1
BENDING STRENGTH (ASTM D790)mPas		84	76
BENDING ELASTICITY MODULUSmPas		3010	3090

ATTENTION MKD can be used for gluing marble, stones and granite. It can not be used for gluing different materials (such as iron, wood, glass and the like) When applied outdoors, polyester adhesives are subject to weakening or breakage in presence of sudden changes in temperature. To prevent any such inconveniences, we recommend placing fixed bolts or other supports to improve the gluing power. It is recommended using fixed bolts also when the adhesive is subject to the action of heavy loads (false ceilings, wall coatings, etc.)

COLOUR

The colour shades of the catalysed adhesive depend on many factors:

- QUANTITY OF CATALYST USED / higher or lower catalysis speed.
- EXPOSURE TIME TO UV RAYS / if the support is indoors or outdoors.
- AGEING OF THE SUPPORT.

If the end-user is mixing the colours using his own materials, being the matter outside our control, we are not in a position to determine if and to which extent such operations may affect the final result.

When the shade of the adhesive is determinant, it is vital to obtain customer's approval first, submitting him a perfect sample. In this case, the aesthetical aspect becomes of primary importance, being completely subjective. In no event can our product be mixed up with similar products of competition and it should be catalysed using a catalyst of our own make. When the adhesive is marked with its colour or with wordings like TRAVERTINO, ROSSO VERONA, ROSA ASIAGO, GRIGIO PIETRA SERENA, BASALTINA, BOTTICINO, etc., those denominations are just indicative of a basic shade, therefore it is up to the customer to necessarily verify the suitability of the adhesive to the application on a specific material.

GLUING

The gluing power of a polyester adhesive can vary according to various factors. It is therefore recommended to:

1. always store containers well closed;
2. apply the adhesive to dust-free, dry surfaces placed far from humidity or heat sources; the adhesive should not be applied to overheated surfaces (in presence of flames or at high temperatures), or being subject to mechanical strain. In such circumstances, it is advisable to ask for producer's advices **MKD** must not be mixed up with similar products.

PUTTYING

The polyester adhesive is largely used for puttying, namely for filling of cavities or cracks to be found on floorings in marble, stone and granite. When puttying, please follow the advices below:

- a) avoid puttying supports larger than 1 to 1,5 cm;
- b) the surfaces should be clean, dustfree and completely dry.

IMPORTANT

In view of the different absorption capacity of materials and of their different mineralogical composition, it is advisable to make a preliminary test prior to the putting operation; it should be waited at least 24 hours from sanding the adhesive and the sample should be polished if possible. The final sample should be submitted to the customer for approval. In presence of halos around the putting, we suggest to interrupt the job and consult the supplier on the most suitable putting type

HANDLING AND STORAGE

The product **MKD** must be stored in the original containers, perfectly sealer, at a temperature between 0 and 30°C and shielded from direct sunlight. In these conditions, the product has a self life of 12 months of the date quoted in the delivery note. If the material has been stored for longer than its recommended self life, it might still be suitable, but this has to be determined beforehand by performing quality checks on its application-related properties.

LIMITS OF RESPONSIBILITY

We decline all responsibility for work and damage which may result from improper or erroneous use of the product. The indications we give on the characteristics of the product and the instructions on how to use, are the results of in depth laboratory and field tests. However, when the products are used and as the possibility of providing other elements on which to summon judgement does not exist, these indications must not be considered as binding and therefore do not constitute formal guarantee. Federchemicals S.r.l. declines all responsibility regarding the suitability of the product for each particular application. It is in fact the task and responsibility of the user to check if the product described is appropriate for the use to which it is destined, and to carry out all the required preliminary tests. This product must be preserved, handled and used according to the sanitary and safety regulations and good industrial practice and in compliance with the law provisions in force.

A PRELIMINARY TEST IN A SMALL, HIDDEN AREA IS RECOMMENDED BEFORE APPLICATION
