

Mortar to be injected for structural reinforcement of buildings of special artistic and historical interests.

SPECIAL FEATURES

High permeability, even without wall preliminary wetting, easy leakage cleaning, chemical-mechanical compatibility, absence of efflorescence even in very wet environments.

COMPOSITION OF THE FORMULA

It consists of natural calcium and special hydraulic binders, chemically stable and with a very low content of soluble salts, impalpable powder of high-purity quartzes, extra-fine powder of pozzolana and a special combination of fluidizer, retentive and aerating additives. The special formula, produced in planetary dispersion 1/10.000 in less than 20 minutes, results in a homogenous white premix. Microfibers can be added to the mortar to improve its mechanical properties in special uses.

FIELDS OF APPLICATION

LEDAN TA1 is extremely versatile. It can be used for reinforcement of: brick vaults, mix stony colonnades, archaeological structures, masonry structures with frescoes or murals.



INSTRUCTIONS

LEDAN TA1 is a premix ready-to-use with the addition of water only. Mix vigorously LEDAN TA1 with water for at least 3 minutes.

RECOMMENDED DOSES		
USE	LEDAN TA1	WATER
PRE-CONSOLIDATION OF DECOHERED SURFACES	10 Kg	16 lt
REINFORCEMENT OF MASONRY STRUCTURES, VAULTS, ETC...	10 Kg	8 lt

INSTRUCTIONS



- 1) Stop properly the possible spill of the product from the plaster with appropriate LEDAN RALAC stucco (also available in ready-to-use paste in the appropriate tube with spout, in a 1kg pack).
 - 2) Carry out the drilling of masonries in Quincunx pattern. The maximum distance between holes should not exceed 50 cm and the maximum depth of holes should not exceed 2/3 of the masonry thickness. Holes diameter min 8 mm.
 - 3) Clean thoroughly the holes blowing and sucking air.
 - 4) Inject LEDAN TA1 uninterruptedly, starting from the bottom to the top.
- * If the drilling and cleaning operations are carried out properly, the LEDAN TA1 even without preliminary wetting of the wall and the application of a very low pressure, will flow inside the masonry, permeating evenly. In case it doesn't happen, check again the potential receptivity of the holes made.

LIMITS OF USE



LEDAN TA1 is a lime-based compound, therefore avoid application in extreme cold conditions (minimum temperature below 5° C) or extremely hot (maximum temperature above 35° C).

The application of the LEDAN TA1 is possible by metering screw, compressed air or pistons systems, both manual or electric. It is anyway suggested to use equipments that allow to let into the masonry a large quantity of product, not requiring charging stops.

CHEMICAL - PHYSICAL FEATURES					
SPECIFIC WEIGHT	1,21 Kg/DM ³	MEDIUM	ADHESION	1,4 N/mm ²	EXCELLENT
INITIAL SETTING	18 HOURS	MEDIUM	EXUDATION	TRASCURABILE	EXCELLENT
FINAL SETTING	24 HOURS	MEDIUM	STEAM PERMEABILITY	11 μ	GOOD
WORKABILITY	3 HOURS	MEDIUM	ELASTIC MODULE SEC COMP	11.000 N/mm ²	MEDIUM
COMPRESSION STRENGTH	15 N/mm ²	HIGH	WATER RETENTION	>80%	EXCELLENT
BENDING STRENGTH	3,5 N/mm ² (28 gg)	HIGH	SHRINKAGE	5%	EXCELLENT

N.B. The mortar was characterised taking into account its own application mode. The numerical values refer to averages detected on media lab reproducing wall structures problems.

EFFLORESCENCE

To evaluate if any soluble salts contained in a mortar, may cause unwanted phenomena of chemical and chromatic alteration, it is possible to carry out a lab test according to the RAL 544/3 regulation. LEDAN TA1 undergoing such a test does not cause efflorescence phenomena.

EXPERIMENTS CARRIED OUT IN BUILDING YARDS UNDER THE "MINISTRY OF HERITAGE AND CULTURAL ACTIVITIES" CONTROL

A product to be used in the cultural heritage sector, not only requires rigorous laboratory studies, but also careful checks in building yards, aiming to verify the effective results on duration and stability, together with the absence of direct and indirect negative effects and possible reversibility. LEDAN TA1, developed thanks to a research promoted and financed by the Ministry for Heritage and Cultural Activities, Superintendence of Matera (Cave Churches) and Superintendence of Southern Etruria (Necropolis of Tarquinia). The application tests carried out during the research, have proved that the product comply with the target-requirements and not presenting negative side effects, can be used on monumental restoration.

DURABILITY

Some LEDAN TA1 samples undergoing an accelerated aging cycle, simulating a natural aging of about 20 years, resulted in a performance downfall below 5%.

SPECIFICATIONS

Injections for structural consolidation of decohered masonry, vaults and manufactures, also with frescoes, carried out using a premix composed by special hydraulics binders (C30) chemically stable and with very low soluble salt content, inert flints and calcareous in combination with hyperfluidifying additives. Because of the application peculiarity the premix must be tested for at least 10 years in research promoted by the BB.AA.CC Ministry. As for the product used, its principal chemical-physical features, the places and date of occurred testing must be declared. The producer must also supply the papers relating to the performed research activity, ratified by the Public Organ responsible for control thereof.

STORAGE

24 months if kept in dry place and closed containers.

PACKAGE

Buckets of 15 Kg

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