

deffner & Johann

Supplies for RESTORATION | CONSERVATION | ART HANDLING – SINCE 1880

TECHNICAL DATA SHEET

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LEDAN Adranal is a transpiring mortar for protection of surfaces from water or atmospheric agents.

PARTICULAR FEATURES

The product is a special pre-mixed perspiring, due to the special composition it anchors tenaciously itself to the common building materials, becoming integral part of the structure. The presence of natural pozzolana guarantees an excellent resistance to the breaking up action of the marine aggressive waters.

COMPOSITION OF FORMULATION

It is made up of special binders with chemical-mechanical high resistance with a low content of soluble salts, fine grinded slate, very fine pozzolana and a particular combination of additives. The special formulation, produced in 1/10,000 planetary dispersion for a time not under 20 minutes, forms a homogenous pre-mix of a natural white colour.

APPLICATION FIELDS

ADRANAL is an extremely versatile formulation. It can be applied on summit walls, archaeological structures, dome's extrados, waterproofing of fountains basins, swimming pools and lift shafts. Ready-to-use with the addition of water only, it is particularly suitable for the restoration of premises where it is necessary a plaster work on dump walls or on the ground, as it anchors strongly onto the wall becoming a primer for the new plasters. Particularly vapour-permeable, is highly waterproof; Extremely resistant to chemical aggressions (chlorine, acid rains etc..)

PREPARATION'S INSTRUCTIONS

LEDAN ADRANAL is a premix ready-to-use with the addition of water only. Knead energetically, for about 10 minutes ADRANAL with water. To reach better results is necessary the use a mixer tool.

RECOMENDED DOSES

USE	LEDAN ADRANAL	WATER
PRE-CONSOLIDATION OF PLASTERS IN WET PLACES	1° coat 10 Kg 2° coat 10 Kg	2,5 lt 2,0 lt
PROTECTION OF STONY SURFACES	1° coat 10 Kg 2° coat 10 Kg	2,5 lt 2,0 lt

INSTRUCTIONS FOR USE

- 1) Remove the friable parts and the plaster; wash well wetting plentifully.
- 2) Smooth every irregularity to uniform the surfaces.
- 3) Knead ADRANAL with clean water mixing for at least 10 minutes with electrical mixer tool
- 4) Apply the product with brush, till to obtain the total covering of the bottom.
- 5) Repeat the operation after 4-5 hours using preferably a spatula to create a coat of 3 mm.
- 6) Eventually give a colored coat without waiting for the drying of the last coat. Do not apply resins on the product.

* ADRANAL can be used to waterproof pools, to substitute not perspiring elastomeric sheathes; extrados of vaults, protection of stony surfaces.

LIMITS FOR THE USE

Do not apply LEDAN ADRANAL in periods of extreme cold (with minimum temperatures less than 5° C) or extreme heat (with maximum temperatures over 35°C).



Smoothing
mortar



EQUIPMENTS FOR USE

The application of LEDAN ADRANAL can be done with manual systems (brush or spatula). To cover very large surfaces it can be applied with the equipment normally used for plaster's application.

PHYSICAL - CHEMICAL FEATURES					
SPECIFIC WEIGHT	3-4 Kg/DM ³	MEDIUM	ADHERENCE	20 N/mm ²	EXCELLENT
INITIAL SETTING	1-2 HOURS	MEDIUM	EXUDATION	TRASCURABILE	EXCELLENT
FINAL SETTING	4-5 HOURS	MEDIUM	STEAM PERMEABILITY	9 μ	GOOD
WORKABILITY	2,5 HOURS	MEDIUM	ELASTIC MODULE	250 N/mm ²	MEDIUM
POTERE COPRENTE	45 N/mm ²	HIGH	WATER RETENTION	>96,7%	EXCELLENT
RESISTENCE TO BENDING	7,1 N/mm ² (28 gg)	HIGH	POTERE D'IMBIBIZIONE	3,6% on weight	EXCELLENT

N.B. The material was characterized bearing in mind its own application modalities. The numerical values refer to averages revealed on laboratory supports reproducing problems inherent in building structures.



EFFLORESCENCE

To evaluate if possible soluble salts present in a mortar may cause undesired chemical and chromatic alteration phenomena, it is possible to carry out a test according to the RAL 544/3 regulations in the laboratory. The formulation LEDAN ADRANAL undergoing such a test does not cause efflorescence phenomena.

EXPERIMENTATIONS CARRIED OUT IN YARDS CHECKED BY THE MINISTRY FOR CULTURAL HERITAGE AND ACTIVITIES

A product to use in the sector of cultural heritage, as well as rigorous laboratory studies, also requires careful checks in yards, aiming to verify real behaviour over time, stability, the absence of direct and indirect negative effects and possible reversibility. LEDAN ADRANAL, has been used in interventions of restoration executed by the Archeological Supervision for Southern Etruria, in the necropolis of Tarquinia (VT), for the protection of the top of the Middle Age Walls of Bassiano (LT), for the basin of La Barcaccia Fountain in Rome, Naiadi Fountain in Rome, Church of Santa Caterina dei Funari (Rome), extrados of vaults in Fort Maoel in Malta.



DURABILITY

Some LEDAN ADRANAL samples undergoing an accelerated aging cycle, simulating a natural ageing of around 20 years, have demonstrated a performance drop of under 5%.

SPECIFICATION ENTRY

The mortar can be applied with spatula or brush. Suitable to protect vertical and horizontal surfaces of buildings from driving rain or seepage of water, without reducing the steam permeability of the walls. The specific features of the material, like absence of shrinkage, wet seal, thixotropy, had been opportunely documented by laboratory data. Because of the application's peculiarity the premix has been tested for more than 10 years in researchs promoted by the Ministry for Cultural Heritage and Activities.



STORAGE

If conserved in a dry place and closed containers the product is conserved for 24 months.



PACKAGES

Buckets/bags of: 20 Kg

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