

CONSOLID DRY

A consolidating agent for porous stone and concrete formulated with ethyl silicates



TECHNICAL SPECIFICATIONS



FIELD OF APPLICATION



APPLICATIONS



Description

CONSOLID DRY is a liquid mono-component consolidating agent that penetrates deeply into the support, formulated with partially hydrolysed polyethyl silicates (including TEOS) that polymerises by reacting with the humidity present in the air (hygro-hardening).

CONSOLID DRY when applied to natural stone or concrete structures (in several consecutive coats wet-on-wet), penetrates deeply into the pores (capillaries) and reacts chemically, changing into silica gel.

The silica gel produced becomes the new binder capable of consolidating the material.

Field of application

CONSOLID DRY is used as an impregnating agent to consolidate any type of building material with medium-high porosity with absorbent power:

- Natural stone.
- Concrete.
- Reconstructed stone.

CONSOLID DRY is specially formulated for treating artistic assets against deterioration caused by ageing and atmospheric agents.

Advantages

- CONSOLID DRY, once the cross-linking reaction terminates, it becomes a natural binder capable of recreating the natural compactness and cohesion of the treated material (stone and concrete) without adding synthetic products.
- CONSOLID DRY does not alter the aesthetic appearance of treated surfaces.

General preparation of the laying support

An effective intervention from both an aesthetic and functional perspective entails the following preliminary operations:

- Clean the surface in the gentlest way possible (use DESMOG A or other methods, for example packs). Physical methods based on pressure (power washes, milling, sandblasting) are unsuitable, as they damage the aesthetic layer of the object.

- For heavily deteriorated materials with a highly flaky surface, apply a “preventive” coat of CONSOLID DRY at least 2–3 days before starting the wash.

The purpose of this coat is to prevent crumbling of the surface.

- Verify that the surface to be treated is dry and absorbent.
- Apply at temperatures between +15 and +25°C and with low atmospheric humidity (maximum 50% R.H.).
- Install an effective protection for the treated part for at least 2 days, to protect it against the adverse effects of the sun or rain.

Preparing the product

- CONSOLID DRY is ready-to-use.

Do not dilute the product unless it is absolutely indispensable, that is, when the porosity of the layer to be consolidated is particularly low.

For dilution, only use anhydrous white spirit.

- Shake the product before drawing it.

CONSOLID DRY

Application of the product

► Principles

Correct application implies the penetration of CONSOLID DRY through the entire deteriorated layer, up to point where the material to be consolidated is sound.

On the other hand, incorrect application implies the stratification of CONSOLID DRY near the surface, resulting in the formation of local hardening which could be more detrimental than the original problem to be solved with the treatment. Since there is a wide variety of materials, it is not possible to establish the possible cases in advance and the only way to solve the paradigm is to perform preliminary trials on a limited portion of the material to be treated.

► Preventive checks

Preventively verify any unforeseeable incompatibility in one or more small zones (roughly 0.5 m²). Generally speaking, high ion (inorganic salts) concentrations can generate white efflorescence.

► Operativeness

• The product can be applied with:

- low-pressure wetting;
- brush or roller;
- immersion;
- pad.

- For deep penetration, apply several coats of CONSOLID DRY wet-on-wet.
- Wait two weeks after the first treatment so that the active substance can cure completely (formation of the silica gel).
- If necessary, a second impregnation cycle can be completed.

NOTE: during application, any colour toning towards grey or the formation of shiny layers on the surface indicate excess product that must be eliminated immediately with anhydrous white spirit.

► Treatments subsequent to CONSOLID DRY

Roughly 3 weeks after the application of the last coat of CONSOLID DRY, one or more of the following treatments can be applied:

- Application of NORDRY 200 P (solvent-based siloxane hydrophobicising agent, see Technical Sheet);
- Application of SILAN PRIMER (silane-based liquid hydrophobicising/impregnating agent, see Technical Sheet);
- Anti-graffiti treatment with ANTIGRAFFITI (a water-based hybrid water- and oil-repellent product, see Technical Sheet);
- Painting cycles with RIVENORD SILAC (waterproof paint formulated with siloxanes with high breathability, see Technical Sheet).

Consumption

It is difficult to quantify the consumption of CONSOLID DRY as it depends on the nature of the material to be consolidated.

We recommend determining the consumption on a sample surface before calculating the order quantity.

The following approximate consumption can be considered:

TYPE OF APPLICATION	minimum consumption	maximum consumption	UoM	DILUTION
-	0,5	2,5	L/m ²	-

Cleaning of tools

- Wet product: clean with WHITE SPIRIT or isoparaffin solvent.
- Hardened product: remove mechanically.

Technical data

► PRODUCT IDENTIFICATION DATA

	UoM	value
Density at 23°C, EN ISO 2811-1	kg/L	0,96 ± 0,05

CONSOLID DRY

► PRODUCT IDENTIFICATION DATA	UoM	value
Kinematic viscosity (ISO cup 3, 23°C), EN ISO 2431	s	55 ± 5
Active substance content	-	(68 ± 1)%
Silica content	-	(29 ± 1)%
Appearance	-	Transparent liquid
Odour	-	Of solvent

Storage of the product

- 18 months in the closed original packaging, in a dry and covered place away from direct sunlight, at a temperature between +4°C and +30°C.
- Protect the product against humidity.

Packages

VARIANT	PACKAGE	ADR	PACKAGES FOR PALLETS	COMPONENTS
-	1 L x 12 - can	P*	32 – box	
-	5 L x 4 – metal can	P*	18 boxes	

legend

P* = DANGEROUS goods packed in limited quantities (packed as per Chap. 3.4 ADR)

LEGAL NOTES

Advice on how to use our products corresponds to the current state of our knowledge and does not involve the assumption of any guarantee and / or responsibility for the final result of the work. They do not refore exempt the customer from the responsibility of verifying the suitability of the products for the use and the prefixed purposes through preventive tests. The website www.nordresine.com contains the latest revision of this datasheet.

EDITION

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