

# DRACOSEAL

OSMOTIC, ONE-COMPONENT CEMENTITIOUS  
BREATHABLE COATING FOR WATERPROOFING  
CONCRETE AND MASONRY SURFACES



**DRACOSEAL** is an osmotic, one-component cementitious mortar, ideal for waterproofing cellars, tanks, pipelines, lift shafts, basins and walls. Thanks to its osmotic properties, **DRACOSEAL** penetrates the outer layer of the substrate and creates a coating which is resistant to both positive and negative thrust, thus providing maximum adhesion to the substrate and durability of the intervention. The product is non-toxic as per Min. Decree dated 21.03.73, Min. Decree 174:2004 and may thus be used in contact with drinking water (Certificate of suitability EUROFINS n. AR-13-ID-018069-01).

## BENEFITS

**DRACOSEAL is an osmotic cementitious coating for rigid waterproofing concrete and masonry surfaces. The benefits of using DRACOSEAL are:**

- ✓ **WATERPROOF EVEN UNDER COUNTERTHRUST:** DRACOSEAL waterproofs and withstands even negative hydraulic pressures;
- ✓ **RESISTANT TO THE ENVIRONMENTAL CHEMICAL ACTIONS:** DRACOSEAL has a good resistance to the aggressive environments
- ✓ **RESISTANT TO ABRASION:** DRACOSEAL has a very high surface resistance;
- ✓ **EASY LAYING:** DRACOSEAL is quick and easy to apply by brush or spray thanks to its fluid consistency.



## AREAS OF APPLICATION

**DRACOSEAL is an easy-to-apply waterproof coating; it is used to fill and seal empty spaces and porosities with an osmotic effect. It is ideal for:**

- ✓ Waterproofing of cellars, retaining walls, lift shafts, tanks, pools and internal/external walls at large even in retaining structures.
- ✓ Waterproofing of pipelines, irrigation channels and water tanks, for drinking water as well.
- ✓ Waterproof coating of pipelines for wastewater and sewage;
- ✓ Waterproof coating of walls made up of cement blocks, concrete, gas beton.
- ✓ Waterproof coating of structures subject to sandblasting, such as columns, profiles, bulwarks.
- ✓ New jersey barriers exposed to car traffic of roads and highways.



## HOW TO USE

### SUBSTRATE CLEANING

- ▶ remove all loose and crumbling concrete parts from the area concerned with the restoration work, including grout laitance, through mechanical chiselling or power washing, by taking care not to damage the structures.
- ▶ remove stains, efflorescences, residues of oil, grease, varnish, lime, dust, dirt, etc.;
- ▶ remove any previous restoration work if irreparably damaged or deteriorated;

### SUBSTRATE PREPARATION

- ▶ Brush or sandblast (on large surfaces) the areas to be repaired, by removing any trace of dust. First repair all the empty spaces, holes, cracks found with the FLUECO line mortars.
- ▶ water infiltration on the substrate: The presence of water seepage and infiltration on the substrate may provoke the washing of mortar prior to complete hardening. Thus it will be necessary to prevent any contact with water before the application of DRACOSEAL, by using the quick-setting mortar HYDROPLUG, or even by deviating water with appropriate drainage.
- ▶ saturate the surface with pressurized water and wait for evaporation. The free water on the surface must be removed with compressed air or with a cloth.

## MIX PREPARATION

Pour into a suitable container 5.5-6 litres of water and gradually add DRACOSEAL by observing the specified mixing ratio. Slowly mix for at least 4 ÷ 5 minutes till getting a well-blended and lump-free mix. Let the mix stand for about 5 minutes, then mix again for a few minutes before proceeding with the product application. Check that all of the product has been correctly mixed and that no residues of dust have remained along the walls and on the bottom of the container.

## LAYING

The areas to be treated must be dampened with water before treatment. DRACOSEAL is formulated to be applied by brush or spray. Application by brush: load the brush with product and apply a thick coat, then proceed with levelling q.s. Wait at least 5-6 hours (depending on the absorbency of the substrate and on the environmental conditions) between the first and second coat, by carefully avoiding to apply the next coat if the previous one is not totally dry. The brushstrokes shall have just a horizontal direction, to obtain a nice-looking finish. Pay particular attention while treating corners and fillet joints. Application by spray: dampen the substrate to saturation and apply DRACOSEAL in two layers, by using a regular plastering machine.

## PACKAGING AND STORAGE

DRACOSEAL is packaged in:

25 kg bag

If the product is stored properly in its original packaging, indoors in a dry and frost-free location, it maintains its original features for one year.



## AVAILABLE COLORS

DRACOSEAL is available in white and cement grey

## WARNINGS

- ▶ Do not use on surfaces of gypsum, plasterboard, plastic plasters, varnished walls, chipboard and wood composition panels, asbestos-cement.
- ▶ Do not use on flexible surfaces.
- ▶ Do not apply onto walkable surfaces exposed to heavy traffic.
- ▶ DRACOSEAL tolerates slight humidity. Do not apply in the presence of high humidity or on stagnating water.

## PRODUCT FEATURES

APPEARANCE	Powder
COLOUR	Grey - White
APPARENT MASS VOLUME	approx. 1,3 kg/l
PACKAGES	sacco da 25 kg
CONSERVAZIONE	12 month

## APPLICATION DATA

COLOUR OF MIX	Grey or white
MIXING WATER	5.5-6 litres of water per 25 kg bag
DENSITY OF MIX – UNI EN 1015-6	2000 kg/m <sup>3</sup>
CONSISTENCY - UNI EN 1015-3	225 mm
APPLICATION TEMPERATURE RANGE	+5 ÷ +35°C
OPERATING TEMPERATURE RANGE	from - 20°C to +80°C
POT LIFE OF MIX	approx. 1 h
HARDENING TIME - UNI EN ISO 13294	Start: 360 min. (6 h) ; End: 480 min. (8 h)
APPLICATION OF THE NEXT COAT AT 20°C RH 65%	About 6 hours depending on the substrate (max 24 hours)
COMMISSIONING (20°C R.H. 65%)	at least approx. 7 days
MINIMUM APPLICATION THICKNESS	2 mm approx. 1.6 kg/m <sup>2</sup> per mm of thickness
CONSUMPTION	3 kg/m <sup>2</sup> recommended minimum (with light humidity) approx. 2 mm 5 kg/m <sup>2</sup> with hydraulic pressure (1 atm) approx. 3 mm

## PERFORMANCE CHARACTERISTICS AS PER EN 1504-2

COATING (C) ACCORDING TO MC AND IR PRINCIPLES 20°C - 50% R.H. – THICKNESS 2 mm

PERFORMANCE CHARACTERISTICS	TEST METHOD	REQUIREMENTS	PRODUCT PERFORMANCE
<b>BOND STRENGTH ON CONCRETE</b> (substrate type MC 0.40w/c ratio = 0.40) according to EN 1766	EN 1542	for rigid systems without traffic: $\geq 1.0$ with traffic: $\geq 2.0$	<b>2,3 MPa</b>
<b>COMPRESSIVE STRENGTH</b>	EN 12190	not required	<b>42 MPa at 28 days</b>
<b>PERMEABILITY TO CARBON DIOXIDE</b>	UNI EN 1062-6	$S_D > 50$ m	<b>1120m</b>
<b>PERMEABILITY TO WATER VAPOUR</b> - equivalent air thickness $S_D$	EN ISO 7783-1	Class I $S_D < 5$ m Class II $5 \text{ m} \leq S_D \leq 50$ m Class III $S_D > 50$ m	<b><math>S_D &lt; 0,9</math> m class I</b> (permeable to water vapour)
<b>CAPILLARY ABSORPTION</b>	EN 13057	$W < 0,1 \text{ kg/m}^2 \times \text{h}^{0,5}$	<b>0,048 <math>\text{kg/m}^2 \times \text{h}^{0,5}</math></b>
<b>REACTION TO FIRE (EUROCLASS)</b>	EN 13501-1	class declared by the manufacturer	<b>A1</b>
OTHER FEATURES			
<b>RESISTANCE TO POSITIVE HYDRAULIC THRUST</b>	UNI EN 12390/8	<b>5 Bar (50 metres water column)</b>	
<b>RESISTANCE TO NEGATIVE HYDRAULIC THRUST</b>	UNI 8298/8	<b>1 Bar (10 metres water column)</b>	
<b>RESISTANCE TO FROST AND THAW AS PER THE ASTM C 666 TEST</b>	ASTM C 666	<b>no alteration after 50 cycles at -26° C</b>	
<b>STANDARD RESISTANCE TO MOULD GROWTH</b>	TT-P 296	<b>no trace of mould growth after 21 days of incubation</b>	
<b>RESISTANCE TO SALT SPRAY</b>		<b>no deterioration after immersion in a solution at 32° C for 300 hours</b>	

## ITEM SPECIFICATIONS



In order to waterproof all the parts even subject to negative water pressure, apply **DRACOSEAL** in two successive coats in full compliance with the instructions and recommendations of the manufacturer, **Draco Italiana S.p.A.**, which may upon request provide technical support with its skilled personnel.

### Legal notice - SLCMP version dated 01.03.2017

In the technical specifications herein, Draco Italiana s.p.a. used the indicators therein specified, with the relevant standards.

Please check if this Sheet and the figures therein contained apply to the product batch you are interested in or if they have been overridden by any later release. If in doubt, check whether this Sheet matches the one applicable at the time of finalising the sales agreement, at [www.draco-edilizia.it](http://www.draco-edilizia.it), and/or contact our Engineering Department.

No advice provided by our staff, either verbally or in writing at your request, about the potential applications of the Products shall be binding under the sales agreement or shall be considered an integral part of the agreement. Such advice is based on our experience and on the best available practical and/or scientific knowledge; as such, it shall not be binding or conditional on the buyer or user. Please try our products first to find out whether they are fit for your intended use or application; in any case, you shall be solely responsible for your choice.