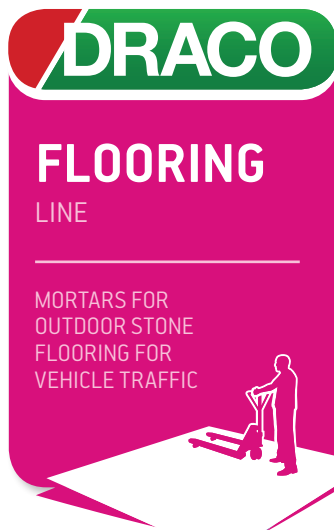


# DRACOSTONE

PRE-BLENDED FLUID MORTAR WITH IMPROVED FLOWABILITY AND RESISTANCE TO DE-ICING SALTS AND FREEZE-THAW CYCLES FOR GROUTING STONE FLOORING FOR VEHICLE TRAFFIC



**DRACOSTONE** is a pre-blended cement mortar with high compressive strength for grouting external, architectonic stone flooring that is subject to vibration, traffic and thermal variations. **DRACOSTONE** is simply blended with water to obtain a fluid, non-segregating mix with superior bonding strength, flowability and mechanical resistance. It is ideal for squares, pavements and bike paths, roads, car-parks, cobblestones, curbing stones etc.

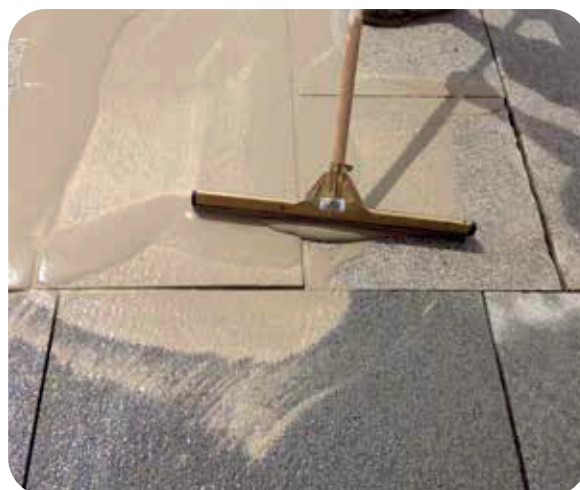
## BENEFITS

- ✓ **OPTIMUM RESISTANCE TO AGGRESSIVE ENVIRONMENTS:** **DRACOSTONE** is long-lasting thanks to its superior resistance to freeze-thaw cycles (class XF4 EN 206 - UNI 11104) and de-icing salts (classes XS3 and XD3 EN 206 - UNI 11104).
- ✓ **COMPACT MICROSTRUCTURE:** thanks to its microstructure **DRACOSTONE** is impermeable to water and resistant to abrasion even when subject to variations in temperature.
- ✓ **SUPERIOR RESISTANCE TO TRAFFIC AND MECHANICAL STRESS:** the special formula of **DRACOSTONE** ensures high compressive strength and resistance to abrasion and dynamic stress.
- ✓ **NO SHRINKAGE:** thanks to the presence of specific additives with expansive agents **DRACOSTONE** prevents the onset of shrinkage and cracking.
- ✓ **MAXIMUM FLOWABILITY:** the fluid consistency obtained thanks to the particular additives present in **DRACOSTONE** facilitate grouting and ensure that all cavities are totally filled, even when laying over large surfaces.



## USES

- ✓ Grouting joints of natural stone floor surfaces and paved surfaces for cobblestones, smaller bricks, small blocks, slabs and porphyry stone even on a gradient.
- ✓ Grouting joints for roundabouts, pedestrian crossings, bike paths and pavements, car parks, squares and public areas in general.



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## SUBSTRATE

### NEW FLOORING

The substrate must be solid and specifically designed in accordance with the intended use and stresses that the flooring will have to endure during operation.

### PRE-EXISTING FLOORING

Clean thoroughly and remove any debris, dust or flaking parts.

Spray the surface with water. This process avoids the mix water being absorbed by the stone as this could cause cracking and reduce the binding strength of the mortar. Any standing water on the surface or in the joints must be removed.

Expansion joints must be incorporated during the design phase, especially where there are discontinuities, changes in gradient or the presence of elements such as pipes, sewers or manholes.

## PREPARATION OF THE PRODUCT

The DRACOSTONE mortar mix is carried out in a cement-mixer or with low-speed mechanical mixer for little amounts. Pour the mixing water into the cement mixer according to the recommended mixing ratio: 4 litres of water for every 25 kg bag of **DRACOSTONE**, or 16%. Add the product slowly, mixing for at least 4 to 5 minutes until the slurry is smooth and free of lumps. Make sure that all the product has been properly mixed in and that there are no residues of powder on the sides or bottom of the concrete mixer. To increase the fluidity of the mortar add more water without exceeding the maximum recommended dose (4.25 litres per bag, equal to 17% ) and continue mixing. Apply the grout within 40 minutes of mixing (20° C).

## APPLICATION PROCEDURE

Fill the dampened joints by pouring the **DRACOSTONE mortar**. All joints should be completely filled (minimum depth 20 mm) using a rubber squeegee to facilitate application. For large surface areas it is possible to use mixers with stator/rotor pump, provided with extrusion spout, to be inserted into the joint.

The mortar residues must be removed before DRACOSTONE hardening with water and sawdust, sponge or brushes, or by using a special tool.

## PRECAUTIONS

- ▶ Grout all joints on the same day as the laying of the installation screed (fresh on fresh).
- ▶ In the presence of adverse weather conditions (strong wind, rain, or high or low temperatures) protect the flooring for at least 12 hours after laying with protective cloths or an anti-evaporation system to prevent it drying out too quickly.
- ▶ Clear and absorbing stones may create amber halos around the joints area, do some preliminary tests before proceeding with the laying procedure. If this is the case, immediately contact the technical office of Draco Italiana SpA.

## PACKAGING AND STORAGE

**DRACOSTONE** is packaged in:

25 kg bags

If kept in its original packaging and properly stored under cover in a dry place, the product maintains its characteristics for a year.



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## PRODUCT CHARACTERISTICS

APPEARANCE	Powder
COLOUR	Grey
MAXIMUM SIZE OF AGGREGATE	2.5 mm
PACKAGING	25 kg bag
SHELF LIFE	12 months

## APPLICATION DATA 23°C - 65% RH

MIXING WATER	3.75 ÷ 4.25 l per bag
CONSISTENCY - EN 13395-2	60cm (superfluid)
BULK SPECIFIC GRAVITY OF MIX – UNI EN 12190	2250 kg/m <sup>3</sup>
PERMITTED TEMPERATURE OF USE	At 5°C ÷ 35°C
WORKABILITY	approx. 60 minutes
FOOT TRAFFIC	10 – 18 hours
VEHICLE TRAFFIC	3 days (+20° C)

## FINAL PERFORMANCE - WATER 16%

CHARACTERISTICS	PRODUCT PERFORMANCE
COMPRESSIVE STRENGTH - EN 12190	28 MPa (1 day) 42 MPa (3 days) 50 MPa (7 days) 60 MPa (28 days)
FLEXURAL STRENGTH - EN 196-1	6 MPa (1 day) 7 MPa (3 days) 9 MPa (7 days) 10 MPa (28 days)
MODULUS OF ELASTICITY - EN 13412	30 GPa

## AVERAGE INDICATIVE CONSUMPTION

STONE				APPARENT DENSITY	ESTIMATED CONSUMPTION	
DESCRIPTION	SIZE				WIDTH OF JOINT (j)	
	w	l	h		1 cm	1.5 cm
	cm	cm	cm		kg/m <sup>3</sup>	kg/m <sup>2</sup>
slab	20	30	4	1950	6.50	
slab	20	30	6	1950	9.75	
slab	20	30	8	1950	13	
slab	30	50	8	1950	8.32	
slab	30	50	10	1950	10.40	
slab	30	80	12	1950	10.73	
slab	40	80	8	1950	5.85	
slab	40	80	10	1950	7.31	
slab	40	80	12	1950	8.78	
small block	4	4	4	1950	39	
small block	6	6	6	1950	39	
small block	8	8	8	1950	39	
small block	10	10	10	1950	39	58.50
small block	12	12	12	1950	39	58.50

The values given in the tables are for guidance only as stones and slabs are commonly irregular in shape.

### FORMULA FOR CALCULATING CONSUMPTION:

$$\frac{(w + l)}{(w \times l)} \times h \times j \times \text{specific weight}$$

w = width of stone (cm)    l = length of stone (cm)    h = height of stone (cm)    j = width of joint (cm)

$$\frac{(a + b)}{(a \times b)} \times h \times f \times 19,5 = \text{kg/m}^2$$

#### 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.