

DS

One-component, cement-based special mortar for dry shot application, accelerated setting, low rebound and less dust



WHERE TO USE

DS is specially designed for concrete repair and mortar work carried out through application by dryshot method.

Examples of use

- Repair of bridges, docks and dams.
- Façade and balcony maintenance.
- Filling of damages to beams and columns.
- Concrete repair of hard-to-reach construction parts.
- Rock reinforcement.
- General repair and maintenance of concrete constructions.

TECHNICAL DATA

DS is a dry mortar especially designed for spraying.

DS contains cement, well-graded sand up to 4 mm and additives. The mortar's composition means there is little rebound and very low formation of dust. The applied mortar is well suited for further plastering/smoothing.

DS is compliant with the principles described in EN 1504-9 "Products and systems for repair of concrete constructions: Definitions, requirements, quality control and evaluation of compliance. General rules for use of products and systems" and the requirements described in EN 1504-3 "Repair mortar for structural and nonstructural repairs, class R4".

RECOMMENDATIONS

- The surface must be sufficiently coarse when using **DS**.
- With thick layers, use of reinforcement iron/net should be considered.
- Do not add sand, cement or other additives to **DS**.

GUIDELINES FOR USE

Pretreatment

Clean the surface thoroughly. All loose concrete, cement sludge, dust and other impurities must be removed before application. Cleanse corrosion from exposed reinforcement. Porous surfaces should be watered down.

APPLICATION

Apply **DS** using suitable dry-spraying equipment in thicknesses of up to 10 - 12 cm per layer. Make sure that exposed or mounted reinforcement does not vibrate during application, as this can prevent good adhesion to the mortar. Surface and air temperatures must be above +5°C. Plastering/smoothing must be done within short time after application. When a finer surface structure is required, a layer of **Monofinish** is recommended.

Post-treatment

The surface must be protected from rapid drying the first few days. Immediately after spraying, protect the surface from drying by applying curing membrane, covering with plastic film or watering.

CLEANING

Clean tools with water, while the mortar is fresh. Remove hardened material mechanically.

CONSUMPTION

Approx. 18 kg/m² per cm of thickness (approx. 18 x 1.05 kg/m² per cm of thickness considering a 5 % rebound).

PACKAGING

DS is delivered in 25 kg bags and 1200 kg big-bags.

STORAGE

Store in a dry place. Shelf life is 12 months in unopened packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTIFICATION DATA

Class according to EN 1504-3:	R4
Type according to EN 1504-1:	CC
Consistency:	powder
Colour:	grey
Maximum size of aggregate:	4 mm
Chloride ion content: – minimum requirement ≤ 0.05 % - according to EN 1015-17:	≤ 0.05 %

TECHNICAL INFORMATION FOR PRODUCT PREPARATION

Composition of the mix of the mix:	100 parts in weight of DS with 13,5 % of water
Preparation of the mix:	according to EN 196-1
Curing condition:	CC (according to Annex A – EN 12190)

CHARACTERISTICS OF THE FRESH MIX (at +20°C and 50 % R.H.)

Colour of mix:	grey
Consistency of mix:	cohesive
Density of mix:	ca. 2100 kg/m ³

FINAL PERFORMANCE - according to curing defined in the tests methods

Performance characteristic	Test method	Requirements according to EN 1504-3 R4	Product performance
Compressive strength: - 28 days	EN 12190	≥ 45 MPa	> 50 MPa
Modulus of elasticity in compression:	EN 13412	≥ 20 GPa	28 GPa
Adhesion to concrete by pull-off:	EN 1542	≥ 2.0 MPa	> 2.0 MPa
Capillary absorption:	EN 13057	≤ 0.5 kg/m ² ·h ^{0.5}	0.23 kg/m ² ·h ^{0.5}
Thermal compatibility - freeze-thaw cycles using de-icing salts (50 cycles):	EN 13687-1	≥ 2.0 MPa	≥ 2.0 MPa
Resistance to accelerated carbonation:	EN 13295	carbonation depth ≤ than reference concrete	test passed
Exposure classes:	EN 206-1	not required	X0/XC3/XD2/XF2/XA1
Reaction to fire:	EN 13501-1	Euroclass	A1

NOTES: Preparation of samples: compaction according to EN 196-1.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above - information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application: for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequences deriving from the use of the product. Please refer to the current version of the technical data sheet, available from our web site www.mapei.no

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