Marking CE
Reference standard: EN1504-3

RESISTO FLUID ANCHOR

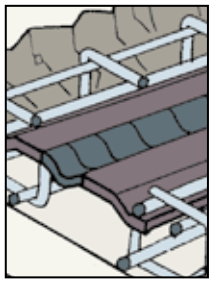
HIGHLY RESISTANT FIBRE-REINFORCED CASTABLE MORTAR WITH COMPENSATED SHRINKAGE FOR ANCHORING OPERATIONS AND STRUCTURAL REFURBISHMENTS OF CONCRETE

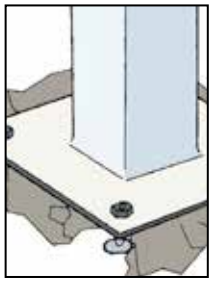
GRANTS *LEED* CREDITS

CHARACTERISTICS	ENVIRONMENTAL		METHOD OF USE	PRECAUTIONS
	ECO GREEN	RECYCLABLE	MIX MECHANICALLY	STORAGE: IN A DRY PLACE

PROBLEM

ANCHORING MACHINES AND REINFORCING CONCRETE STRUCTURES





In very delicate work, such as securing anchor plates for heavy machinery, fixing metal supports and under wall reinforcement, pourable mortars are needed. These mortars must flow in order to guarantee the perfect filling of every cavity; they must also have good adhesion to the surface and to any reinforcing steelwork.

SOLUTION

RESISTO FLUID ANCHOR is ready mixed in powder form, ready to use and contains high resistance damp-proofing bonding agents, selected expansive agents and various additives. The mortar obtained by adding a small quantity of water is of a fluid consistency and free from inert segregation, with excellent bonding adhesion both on iron/steel and on concrete. The presence of suitable expansion agents creates compensated shrinkage both at the plastic stage and in the hardened stage with the development of high resistance to bending and compression even after a brief period of use. Resisto Fluid Anchor does not contain metallic aggregates, chlorides or aluminium powder and is free of alumina cement. The excellent flow capacity and controlled expansion ensures perfect adhesion and that all cavities are filled.

ACCORDING TO EUROPEAN NORMS EN 1504-3 CONCRETE REPAIR
R4
CC
HYDRAULIC MORTARS FOR STRUCTURAL REPAIR

APPLICATION FIELDS

`**RESISTO FLUID ANCHOR** is used for anchoring machine tools, metal frameworks, mounting points, fillings for rigid joints and reinforcement in foundations.

ADVANTAGES

- **High fluidity and flow for rapid filling up of cavities.**
- **Excellent adhesion to steelwork and concrete.**
- **High mechanical resistance and resistance to dynamic pressure.**
- **Low water/cement ratio to achieve a completely waterproof product.**
- **No shrinkage (eliminates the possibility of cracks or holes).**
- **No bleeding (water appearance).**

METHOD OF USE

• PREPARING THE SUBSTRATE

Concrete surfaces must be clean in order to achieve good bonding of **RESISTO FLUID ANCHOR** mortar. It is therefore necessary to remove all loose particles and material lacking in solidity by chiselling, brushing or high pressure water cleansing. Remove any traces of oil, release agents, rust and general dirt. Any exposed steelwork must be cleaned and passivated with STRATO FER or with a grout consisting of STRATO 4900 and cement. Dampen the substrate without creating films of water; any which form can be eliminated using compressed air or a sponge.

• PREPARING THE MIX

RESISTO FLUID ANCHOR must be mixed with clean water (3.3 litres per 25 kg bag). You are recommended to mix in a cement mixer (**1**) first pouring in 2/3 of the water required, then gradually adding the dry product and finally the remaining water. Mix for 5 minutes at the most until the mix is smooth and without lumps. If you need to prepare small quantities of mortar, just mix with a mechanical drill-stirrer and not a trowel. Avoid incorporating too much air during mixing.

• APPLICATION

Pour **RESISTO FLUID ANCHOR** continuously from one side only to encourage air to escape (**2**). To assist this process, when fixing a metal plate, supplementary holes may be made in the metal itself. Because of the product's high degree of fluidity there is no need to vibrate the pour mechanically, but just to move iron bars to and fro to help the mortar into points that are particularly difficult to reach. We recommend protecting the poured section for at least 24 hours by dampening it with wet sacking. We recommend stopping any machines that are running in the area for about 24 hours in case of harmful vibrations while the mortar is hardening.

To fill cavities with a thickness of more than 10 cm, add 30% by weight of gravel (3mm-8 mm). Maximum advisable thickness: 10 cm.

(See following)

1

2

2

TECHNICAL CHARACTERISTICS

	Standard	RESISTO FLUID ANCHOR
Appearance		Powder
Colour		Grey
Particle size		0 to 3 mm
Apparent density		1.40 kg/ℓ
Mix water		13% ± 1%
Storage in original packaging in a dry place		12 months
Mix properties and workability	**Standard**	
Density of mix	**EN 1015-6**	2.10 kg/ℓ
pH of mix		about 12
Workable mix duration (*)		about 60 minutes
Application temperature		+5°C to +35°C
Expansion of mix	**EN 13395-1**	280-300 mm (without shocks)
Minimum application thickness		10 mm
Maximum application thickness		50-100 mm (with 30% gravel)
Application		Manual
Performance characteristics	**Standard**	**Product performance**
Class and type	**EN 1504-3**	**R4 - CC**
Compression strength - after 28 days	**EN 12190**	80 MPa
Compression strength - after 7 days	**EN 12190**	62 MPa
Compression strength - after 1 day	**EN 12190**	35 MPa
Bending strength - after 28 days	**EN 196-1**	12 N/mm²
Bending strength - after 7 days	**EN 196-1**	9 N/mm²
Bending strength - after 1 day	**EN 196-1**	7 N/mm²
Expansion in the plastic phase		≤0.4%
Elastic compression modulus	**EN 13412**	≥20 GPa
Chloride ion content	**EN 1015-17**	Absent
Bond strength	**EN 1542**	≥2.0 MPa
Thermal compatibility with frost-thaw cycles - Part 1	**EN 13687-1**	≥2.0 MPa
Water absorption by capillarity	**EN 13057**	w ≤ 0.5 kg/m²·h$^{0.5}$ - W1
Durability - Resistance to carbonation	**EN 13295**	Test passed
Resistance to displacement of the steel bars	**EN 1881**	<0.6 mm
Thermal resistance - Operating temperature		-30°C to +90°C
Fire reaction	**EN 13501-1**	A1
Hazardous substances	**EN 1504-3**	In accordance with note in ZA.1

Test conditions: temperature 23±2°C, R.H. 50±5% and air speed in test area <0.2 m/s. **The data shown may vary depending on the specific work site conditions: temperature, humidity, ventilation, absorbency of the base coat.**
(*) The times indicated will be longer or shorter as the temperature drops or rises.
Compliant with the general principles defined in **EN 1504-9** - Principles for evaluating the use of products and systems.

(See previous)

• CONSUMPTION
About 2.1 kg/litre.

• PRECAUTIONS
- Use cold water in summer and water at 20°C in winter.
- Application temperature from +5°C to +35°C.
- Do not add water once the mix has started to set.
- Do not add any other materials such as cement, aggregates and additives.
- In hot weather, keep damping the finished mortar surface for at least 24 hours to stop it from drying out too quickly.
- In hot weather (if temperature is over 30°C) open time is reduced to 20-30 minutes.
- Do not apply on smooth surfaces.
- Straight after application clean the tools with water and the coated surfaces with a damp cloth.
- Do not expose the material to the sun in hot weather.
- Store in original closed packaging in a dry place.

PACKAGING

RESISTO FLUID ANCHOR
25-kg Sacks

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