

Conpatch® GC

HIGH STRENGTH, LOW SHRINKAGE, HIGH BUILD SPRAY APPLIED REPAIR MORTAR

DESCRIPTION

Conpatch GC is a cementitious one component polymer modified, Silica Fume based gunite repair mortar that cures to provide a durable water resistant high strength material. It is for mechanical application by dry shot guniting and has excellent adhesion. Meets the requirements of BSEN 1504-3 class R4.

USES & ADVANTAGES

Conpatch GC is for mechanically applied concrete repair work by dry process guniting. The material is used for large repairs to reinforced concrete where there is corrosion to the reinforcement e.g. sea walls, bridge decks, piers, tunnels, viaducts, slab soffits, reservoirs sewers etc. The product is formulated to produce a high build, low rebound, fast strength gain repair which can be applied by standard spraying techniques.

Advantages include:-

- Chloride free.
- Low drying shrinkage.
- Low rebound & high build.
- High early strength.
- Excellent adhesion to old concrete.
- One component ready to use.
- Limited dust formation.
- Greatly reduced water & carbon dioxide permeability.
- Contains fibres to reduce micro cracking.

PROPERTIES

Form :	Powder
Colour :	Grey
Compressive Strength :	12-15 MPa @ 1 day
ASTM C109	> 50 @ 28 days
Flexural Strength :	8 MPa@ 7 days
ASTM C348	10 MPa @ 28 days
Adhesive strength :	>3 MPa dependent on substrate condition
Drying shrinkage Modified 23°C/RH50% :	
ASTM C490	<350 microstrain @ 7 days
	<500 microstrain @ 28 days
Fresh wet density :	Approx. 2,100 kg/m ³ dependent on actual consistency used
Min. application Temperature :	5°C
Consumption :	Approx. 2.1 kg of Gunite/ltr or 2.1 kg of Gunite/sq.m./mm. thickness
Chloride Ion Diffusion :	Very low < 800 Coulombs
Thermal Expansion :	8 x 10-16 mm/°C

CE Requirements EN 1504-3 class R4

	Results in laboratory	Requirements R4
Compressive strength:	> 50 N/mm ²	> 45 N/mm ²
Chloride ion Content:	< 0.005 %	< 0.05 %
Adhesion:	> 3 N/mm ²	≥ 2 N/mm ²
Carbonation Resistance:	Pass	Lower than control
Capillary Absorption:	0.13 kg.m ⁻² h ^{-0.5}	< 0.5 kg.m ⁻² h ^{-0.5}

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Good surface preparation is essential to achieve adhesion. Saw cut to the extremities of the repair to a depth of at least 10 mm. to avoid feather edges providing a square edge. Cut out the complete area to a minimum depth of 10 mm. up to the sawn edge. The surface must be clean & free of dust, unsound material, dirt, grease, paint, corrosion deposits, algae etc. Grit or grit/water blasting or scabbling is recommended.

Test surface preparation by pull off tests corroded steel in the repair area must be fully exposed, remove scale or corrosion deposits clean to a bright condition & ensure great attention is given to the back of the steel bars.

Important Notes :

Apply only to clean sound substrates.

Never apply to dry substrates.

Always ensure adequate curing of freshly placed gunite.

PRIMING OF REINFORCEMENT

Apply one coat of Congard Zinc or Congard ST & allow to dry before continuing. A second coat may be applied if doubt exists to the integrity of the first.

APPLICATION

Just before application prewet & wash clean the substrate with water remove any free standing water before application. Pressurised air used for cleaning should be oil free.

Ensure all reinforcement is secure to avoid poor build, compaction & bond.

Apply using suitable guniting equipment & ensure good compaction around exposed rebar. The material may be built up in 9 mm. to 50 mm. sections in one pass.

If sagging occurs remove material.

In dry shot processes the nozzle man will determine the water content & therefore the quality of the material sprayed. A low W/C will result in too much dust a high one in slumping

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FINISHING

Strike off with a straight edge & close with a steel float.

Wooden or plastic floats may be used to achieve the desired texture.

CURING

Suitable curing must be undertaken such as plastic sheet, wet Hessian, or a membrane such as **Congard Acrylic** or **Corcure 200**.

OVERCOATING WITH PROTECTIVE COATINGS

Remove any curing compounds before applying protective coatings. The repair material is highly durable, however, other areas will benefit from protection via the use of a protective coating. Use **Congard Acrylic** or **Elastoclad** anti carbonation coating to produce a barrier limiting the advance of chlorides & carbondioxide.

CLEANING

Conpatch GC should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Equipment used with **Congard Zinc** or **Congard ST** should be cleaned with solvent.

LIMITATIONS

Conpatch GC should not be used when the temperature is below 5oC and falling. Do not mix part bags. The product should not be exposed to moving water during application.

Exposure to heavy rainfall prior to the final set may result in surface scour.

PACKAGING

25 kg. 4 Ply plastic lined bags.

STORAGE & SHELF LIFE

Conpatch GC has a shelf-life of up to 12 months in unopened packs kept in a dry store. If high humidity is apparent the life may be reduced to 6-8 months.

HEALTH & SAFETY

Conpatch GC is non-toxic but is alkaline in its nature. When applying gloves & goggles should be worn. Wash off splashes to skin with water. If in eyes wash out with plenty of clean water and seek medical attention.

Conpatch GC is non-flammable.

TECHNICAL SERVICE

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001 : 2008 verified by TUV Nord

COMPLIANCE

In compliance with the directive 89/106/EEC of the council of European communities of 21 December 1988.



EN 1504-3

CONTACT DETAILS**Cormix International Limited**

89 Romkloa Rd., Sansab, Minburi, Bangkok 10510

Tel. (66 2) 917 3955-8, 543 8890

Fax. (66 2) 917 3959, 543 8891

<http://www.cormix.com>

E-mail : info@cormix.com