

Conpatch® 635

ONE PART POLYMER MODIFIED MEDIUM WEIGHT CONCRETE REPAIR MORTAR

DESCRIPTION

Ready to use one part concrete repair mortar which requires the addition of water to produce a medium weight repair mortar. **Conpatch 635** is based on cement, especially graded aggregate, light weight aggregates and additives which produce an easy to use mortar.

Complies to EN1504 Part 9 and EN1504 Part 3.

- Principle 3 : Concrete Restoration (CR).
 - Method 3.1 - Applying mortar by hand.
 - Method 3.3 - Spraying concrete or mortar.

USES & ADVANTAGES

Conpatch 635 is used to repair large areas of reinforced concrete where low permeability high quality repairs are required. It may be used in columns, and beams but due to its low density may also be used overhead and can also be used in small localised patch repairs. It can be applied in sections up to 40 mm. thick in vertical locations and 30 mm. overhead. Thick sections may be built in layers. Deeper pockets can be filled in single applications depending on the incline. Build can be increased significantly by wet spraying i.e. 75-100 mm. vertically and 65-85 mm. overhead depending on the reinforcement locations.

Use for remedial works to principle 3 method 3.1 & 3.3 EN 1504-9, principle 4 method 4.4 of EN 1504-9 and principle 7, method 7.1 & 7.2 of EN 1504-9

Where strength below 30 N/mm² or higher builds are required use **Conpatch 675**.

Advantages include:-

- Low chloride permeability.
- Excellent adhesion.
- High build are application.
- Can be spray applied.
- Suitable for contact with potable water. Conforms to AS/NZS 4020:2005.
- Very low shrinkage.

PROPERTIES AND COMPLIANCE

The following results were obtained at a water : powder ratio of 0.19 and temperature of 25°C.

Appearance: Grey powder
Fresh Wet Density: Approx. 1,580 kg/m³ depending on actual consistency used.

Setting Time: Initial 2.30 hours
 ASTM C191-01a / ASTM C807 Final 4.00 hours

Compressive Strength: Approx. 28 - 35 N/mm²
 ASTM C109 at 28 days

Carbon Dioxide Barrier 10 mm. of Conpatch 635:
 Equivalent to 600 mm of concrete

Chemical Resistance:
 Reduces dramatically chemical attack due to low permeability. Impermeable to acid, gases, water borne chlorides, ions and oxygen. Chloride diffusion is very low.

Drying Shrinkage: < 300 micro strain at 7 days
 ASTM C490 < 500 micro strain at 28 days
Fire Rating: Non combustible
Coefficient of Thermal Expansion: 11 x 10⁻⁶/ °C
Water Absorption: 10 minutes 0.007 ml/m²/sec.
ISAT 2 hours 0.002 ml/m²/sec.
Chloride Diffusion: < 5 x 10⁻¹³ m² s⁻¹.
Pot life: 25-35 min @25 °C.

EN Requirements

Requirements as per EN 1504-3 Class R3
 (Tested at Water : Powder ratio = 15.5%)

	Test Method	Result	Requirements (R3)
Compressive Strength	EN 12190	≥ 25 N/mm ² (Mpa)	≥ 25 N/mm ² (Mpa)
Chloride Ion Content	EN 1015-17	< 0.05 %	≤ 0.05 %
Capillary Absorption	EN 13057	≤ 0.5 kg.m ⁻² .h ^{-0.5}	≤ 0.5 kg.m ⁻² .h ^{-0.5}
Carbonation Resistance	EN 13295	Lower than control	dk ≤ control concrete
Adhesive Bond	EN 1542	≥ 1.5 N/mm ² (Mpa)	≥ 1.5 N/mm ² (Mpa)

SUBSTRATE PREPARATION

Cut back edges at right angles avoiding feather edges to a depth of at least 10 mm.

The substrate should be clean & sound. Remove dirt, dust, oil, grease, laitance, sealers, release agents, curing compounds & paints.

Exposed rebar should be cleaned & protected with **Congard Zinc** or **Congard ST**.

The concrete should be presaturated for preferably 6 hours with water before application.

PRIMING

Apply **Cormix Latex** / cement bonding slurry to prepared surface and whilst still tacky apply **Conpatch 635**.

MIXING

Note that powder must always be added to water. **Conpatch 635** is simply mixed with water to yield a stiff easily workable compound with shrinkage compensating properties.

The quantity of water depends on the desired consistency but as a guide we recommend 15-16% by weight of product.

Mix with a paddle mixer or trowel for at least 3 minutes to ensure a homogenous lump free material is achieved. Do not try to remix the product after losing workability by the addition of more water. Can be applied with a trowel or by spray.

Conpatch® 635

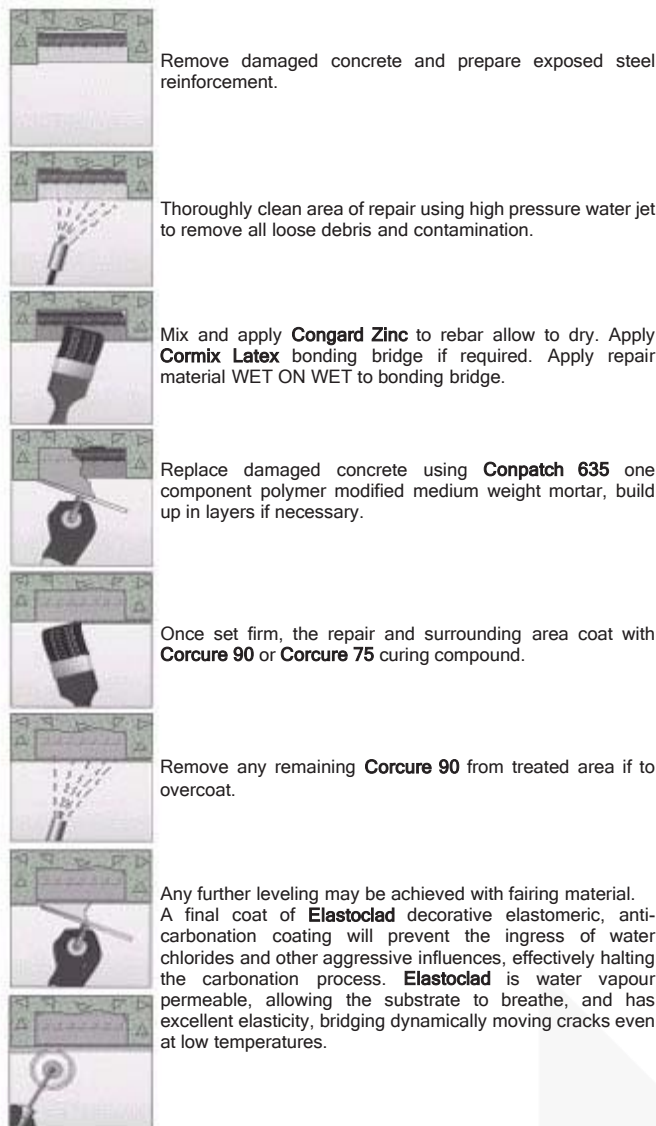
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METHOD OF USE

Ensure exposed steel is firmly secured. Apply **Conpatch 635** by hand or trowel and firmly compact to primed surface. Build up in layers where greater depths than 30-40 mm. are required. Thicker repairs may be achieved by spraying.

If sagging occurs remove material and primer and start again in reduced thicknesses. The repair may be finished with a steel, wooden or plastic float, sponges may be used to achieve the required texture. Do not over work the surface.

Typical System for Concrete Repair Using Conpatch Repair Mortars



CURING

Cure with **Corcure 90**. Large areas should be cured as work progresses.

PACKAGING

18 kg. 4 ply plastic lined bags.

STORAGE & SHELF LIFE

Conpatch 635 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 635 is non-toxic but is alkaline in its nature. Avoid inhalation of dust and contact with skin and eyes.

Wear suitable protective clothing, gloves and eye protection and dust mask. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. When in contact with skin rinse with clean water and cleanse with soap and water.

Conpatch 635 is nonflammable.

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: 2015 verified by TUV Nord.
ISO 14001: 2015 verified by Lloyd's Register International.

CONTACT DETAILS

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