

MINING / CONSTRUCTION

CT-D

SPCC MORTAR IN CT-95 CONCRETE REPAIR SYSTEM

DESCRIPTION

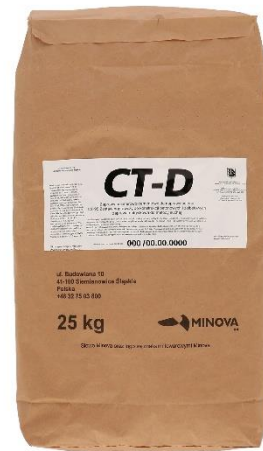
CT-D is a one-component material, ready-to-use after mixing with batched water. CT-D is a cement-based mortar with high quality aggregate up to 4 mm and modified with additives and polymers (PCC). CT-D is part of the CT-95 Concrete Repair System.

APPLICATION AND USE

- Repair and reconstruction of concrete and reinforced concrete
- Sealing and reinforcing of sidewalls, floor and roof of mining excavations, reservoirs and tunnels
- Dry spray concrete

ADVANTAGES

- Perfect consistency and workability
- Watertight, permeable for vapour
- Rapid strength development
- High final strength
- Ease and safety of use
- Minimal rebound during spraying
- Excellent adhesion to concrete



TECHNICAL DATA

The data below are laboratory data. They may vary in practice due to surface properties of the substrate, humidity, pressure, and other factors.

PRODUCT CHARACTERISTICS

Performance characteristics	Performance
Compressive strength	@ 7 days ≥ 60 MPa @ 28 days ≥ 70 MPa
Flexural strength	@ 7 days ≥ 7.0 MPa @ 28 days ≥ 9.0 MPa
Bond strength by pull off	@ 28 days ≥ 2.0 MPa
Freeze-thaw resistance	≥ 200 cycles
Young modulus	≥ 30 GPa
Shrinkage after 56 days	≤ 0.36 ‰
Resistance of capillary absorption	≤ 0.5 $\frac{kg}{m^2 \cdot h^{0.5}}$

APPLICATION DATA

Description	Value
The character of the material	grey powder with aggregates < 4 mm
Mixing ratio	2.3-2.8 litres of water per 25 kg bag
Output on the 10 mm layer	about 20 kg/m ²
Pot life	60 min at 20 °C
The thickness of one layer	up to 50 mm
Ambient temperature and substrate during application	min.+5 °C; max +30 °C

APPLICATION METHOD

1. Surface Preparation

Concrete surface should be cleaned from dust, loose pieces of concrete and protective coatings. Any remaining oil, petrol and paintings have to be removed. Cleaning the concrete substrate should be carried out by hydro-sandblasting. Properly prepared surface should have 1.5 MPa pull-off strength. The surface of the concrete should be wet with water 24 h before starting the repair. Directly before the application excess of water should be removed.

Exposed reinforcement should be protected against corrosion with CT-A/S.

2. Equipment

Standard devices for dry method of spraying: dry spraying machine, air compressor etc.

3. Execution

CT-D may be applied in one or multiple layers, depending on the required thickness. Dosing of water should be adjusted carefully by a trained nozzle operator. The nozzle should be positioned at right angles to the surface. When spraying on the steel reinforcement spray the material from various positions in order to avoid "shadow effect".

If necessary, the rough surface of the sprayed layer may be gently cut with use a steel string and then smoothed with wooden, plastic or sponge trowel. Too strong or long-lasting surface tooling may decrease the performance of the material. It is not allowed to re-use a rebound material.

4. Curing

The repaired area should be protected for a few days against drying, especially when direct sunlight and wither occur. The protection should start directly after application. This action is necessary to avoid shrinkage and/or cracks.

5. Cleaning

Clean tools with water. When hardened clean mechanically.

SAFETY INSTRUCTIONS AND LIMITATIONS

It is recommended that gloves, eye protection and a dust mask are used when handling CT-D. For more details refer to our Material Safety Data Sheet.

The material should not be applied when the substrate and/or air temperature is 5°C and falling. At 5°C static temperature or at 5°C and rising, the application may proceed.

At ambient temperatures above 30°C, the material should be stored in the shade and cool water used for mixing.

PACKAGING AND TRANSPORTATION

25 kg valve sack, 40 bags per pallet. Other packing on request.

STORAGE AND SHELF LIFE

Shelf life 6 months when stored in dry and cool conditions.

DISPOSAL

Follow local regulations.

APPROVALS AND CERTIFICATES

1. Hygienic Certificate HK/B/0820/01/2017
2. Nationa Technical Approval IBDiM-KOT-2018/0135

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ADDITIONAL DOCUMENTATION

- CT-D MSDS

LIST OF REPRESENTATIVES

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- CZECH REPUBLIC: Minova Bohemia s.r.o.
- FRANCE / BELGIUM: Sales office Minova France / Belgium
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- ITALY: Minova CarboTech GmbH Italy branch
- KAZAKHSTAN: Minova Kazakhstan LLP
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