

**MINING / CONSTRUCTION**

**CT-6**

**PCC/SPCC REPAIR MORTAR IN CT-95 CONCRETE REPAIR SYSTEM**

*CE identification according to EN 1504-3:2006 1488-CPR-0111/Z*

**DESCRIPTION**

Repair Mortar CT-6 is a one-component material, ready-to-use after mixing with batched water.

CT-6 is a cement-based mortar with high quality aggregate up to 8 mm and modified with additives and polymers (PCC / SPCC).

The material is dedicated for wet-process spraying as well as for hand repairs of concrete. CT-6 is a part of CT-95 Concrete Repair System.



**APPLICATION AND USE**

- Repair and reconstruction of concrete and reinforced concrete. Suitable for concrete repair works: Principle 3 and 7, Methods 3.1, 3.3, 7.1, 7.2.
- Sealing and reinforcing of sidewalls, floor and roof of mining excavations, reservoirs and tunnels
- Structural concrete repair in aggressive environment
- Wet spray concrete

**ADVANTAGES**

- Perfect consistency and workability
- Watertight, permeable for vapour
- Rapid strength development
- High final strength - – conforms to the requirements of EN 1504-3 R4 classification
- Ease and safety of use
- Excellent adhesion to concrete
- Minimal rebound during spraying
- Resistance to aggressive environment
- Hardened material approved for contact with potable water
- Non-combustibility

**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	CT-6
<b>Compressive strength</b>	@ 7 days ≥ 50 MPa @ 28 days ≥ 65 MPa
<b>Flexural strength</b>	@ 7 days ≥ 7.0 MPa @ 28 days ≥ 7.5 MPa
<b>Bond strength by pull off<sup>1</sup></b>	@ 28 days ≥ 2.0 MPa
<b>Freeze-thaw resistance</b>	≥ 200 cycles
<b>Resistance of capillary absorption</b>	≤ 0.5% $\frac{kg}{m^2 * h^{0.5}}$
<b>Thermal compatibility</b>	≥ 2.0 MPa
<b>Shrinkage</b>	@ 56 days ≤ 0.96 ‰
<b>Young modulus</b>	≥ 20 GPa
<b>Chloride ion content</b>	≤ 0.05%
<b>Resistance to carbonation</b>	higher than control concrete MC (0.45)
<b>Resistance to aggressive environment</b>	XA2

<sup>1</sup> with CT A/S bonding grout

**APPLICATION DATA**

Parameter	CT-6
Colour / form	grey powder with aggregates < 8 mm
The thickness of one layer: minimum/ maximum thickness	10 mm / 50 mm
Amount of water per 25 kg bag	2.6 – 2.9 litres
Pot life at 20 °C	60 minutes
Output	19 kg/m <sup>2</sup> /10 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.

For structural repair it is recommended to use bonding grout CT-A/S immediately before CT-6 application (wet to wet). Exposed reinforcement should be protected against corrosion with CT-A/S.

2. Equipment

Small quantities can be mixed in a drum using a spiral paddle with a slow speed (400/500 rpm) heavy-duty drill.

Greater quantities should be mixed using a forced-action mixer.

3. Execution

If mixing small quantities manually, add one bag 25 kg of the CT-6 to 2.6 – 2.9 litres of tap water. Mix at least for 5 minutes.

For larger volumes, pour 2.6 – 2.9 litres of tap water per every 25 kg bag and when the machine works, add remaining bags of CT-6 and continue mixing. Depending on the ambient temperature and the required consistency, the amount of water required may vary slightly but should not exceed 2.9 litres per 25 kg bag of CT-6. Do not subsequently re-temper with extra water.

Note that in all cases CT-6 powder must be added to water.

In case of use continuous mixing placers (e.g. MAI 4YOU, PFT G-4) follow equipment manufacturer’s guidelines.

4. Curing

The repaired area should be protect for a few days against drying, especially when direct sunlight and wither occur. The protection should start directly after application. These 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 handle CT-6. 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**

- Hygienic Certificate for contact with drinking water BK/W/0341/01/2019
- The product is labelled with CE mark acc. to EN 1504-3 Class R4 requirements. Factory Control Certificate 1488-CPR-0111/Z.
- National Technical Assessment IBDiM-KOT-2018/0135

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## **ADDITIONAL DOCUMENTATION**

- CT-6 MSDS

## **LIST OF REPRESENTATIVES**

- AUSTRIA: Minova MAI GmbH
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- FRANCE / BELGIUM: Sales office Minova France / Belgium
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