

## CONSTRUCTION

# Minotor T

## DRY-SPRAY HIGH STRENGTH CONCRETE

### DESCRIPTION

Minotor T is a dry-spray concrete based on high-quality Portland cement with the addition of other mineral components and graded quartz sand, which when mixed at the site of application with the appropriate amount of water sets to a durable concrete material.

### APPLICATION AND USE

- Dry-spray concrete
- Sealing and reinforcing of sidewalls, floor and roof of mining excavations, reservoirs and tunnels
- Construction of sealing and support packs in mines

### ADVANTAGES

- Rapid strength gain
- High ultimate strength
- Tight for water and gas
- Resistance to aggressive environments
- Low cost
- Ease and safety of use
- 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	Minotor T
Compressive strength after 28 days	≥ 70 MPa
Flexural strength after 28 days	≥ 7 MPa
Pull-off strength	≥ 2 MPa
Density	2100 kg/m <sup>3</sup>
Reaction to fire	A1 (inflammable)

**COMPONENT CHARACTERISTICS**

Parameter	Minotor T
Colour / form	grey powder with aggregates < 2 mm
Amount of water per 25 kg bag	3.0 litres
Pot life at 20 °C	60 minutes
Output	0.50 m³/t
Ambient temperature and substrate during application	min.+5 °C; max +35 °C

**APPLICATION METHOD**

1. Surface Preparation

Before application of Minotor T, remove loose fragments of rock, concrete, dust, greasy stains, formwork release agent etc. Make sure that the equipment and main lines located at the work place are secured & protected. In order to improve adhesion to the substrate surface it is recommended to dump it with water prior to application. For the best results, wet the concrete surface 24 hours before performing the repair. Seal active water with plugging grout Minostop. In case of major water leaks from the ground, eliminate them by injecting organic resins (eg Ekopur HW, Krzemopur S). As the auxiliary method in case of large leaks, a water intake with drainage pipe may be used.

2. Equipment

For the application of Minotor T, use equipment designed for shotcreting using the dry-spray method.

3. Execution

Adjusted water/powder ratio should be ~ 0.12. Recommended distance from the substrate is about 1 - 2 m. The nozzle should be continuously moved along the sprayed area to get a tight layer having the proper, continuous thickness. The air velocity should be adjusted to level where material bonds to substrate but not too much to destroy structure and cause too high rebound. The more exact coverage may be achieved applying 2 or more layers.

4. Cleaning

Clean tools with water. When hardened clean mechanically.

5. Curing

Minotor T requires curing, particularly under strong drying conditions. Minotor T should be cured immediately after finishing in accordance with good concrete practice. In very fast drying conditions, supplementary curing with plastic sheeting taped down at the edges should be used.

In cold conditions, the finished repair must be protected from freezing.

**SAFETY INSTRUCTIONS AND LIMITATIONS**

It is recommended that gloves, eye protection and a dust mask are used when handling Minotor T. 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 35°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 HK/B/0632/01/2016
- Mining Certificate JSHP/33/B/2018

## **DISCLAIMER**

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## **ADDITIONAL DOCUMENTATION**

- Minotor T MSDS

## **LIST OF REPRESENTATIVES**

- AUSTRIA: Minova MAI GmbH
- CZECH REPUBLIC: Minova Bohemia s.r.o.
- FRANCE / BELGIUM: Sales office Minova France / Belgium
- GERMANY: Minova CarboTech GmbH
- ITALY: Minova CarboTech GmbH Italy branch
- KAZAKHSTAN: Minova Kazakhstan LLP
- POLAND: Minova Ekochem S.A.; Minova Arnall Sp. z o.o.; Minova Ksante Sp. z o.o.
- RUSSIA: ZAO "Carbo-ZAKK"
- SLOVAKIA: Minova Bohemia s. r. o., organizačná zložka
- SOUTH AFRICA: Minova Africa (Pty) Ltd.
- SPAIN: Minova Codiv S.L.U.
- SWEDEN / NORWAY: Minova Nordic AB
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