

**CONSTRUCTION**

**EKOPUR MT**

**POLYURETHANE INJECTION MATERIAL**

**DESCRIPTION**

Ekopur MT is two-component polyurethane adhesive, obtained after mixing component A (a mixture of polyols and flame retardants) and component B (polymeric MDI isocyanate with additives) in a volume ratio of 1:1. The adhesive property allows use of it under various geological and mining conditions. Application parameters of the adhesives can be adjusted to customer specific requirements.



**APPLICATION AND USE**

Polyurethane injection resin is used to strengthen and seal brittle and weak rock mass and coal layers which may have varying moisture contents. It is also used to seal water and gas leaks.

**ADVANTAGES**

- High adhesion ability to different rocks
- High compressive and flexural strength
- obtaining the desired strength in a short time
- Good rock mass penetration ability
- Flexibility of the produced bond
- Good hydro-insulation and gas-insulation
- Ability to apply in environments with different moisture content
- Does not increase the endogenous fire risk
- Does not disturb gas indicator readings

**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.

**PROPERTIES**

Parameter	non foaming version	foaming version
Density A	1.15-1.20	1.15-1.20
Density B	1.20-1.25	1.20-1.25
Viscosity A at 25°C	< 800 mPas	< 800 mPas
Viscosity B at 25°C	< 800 mPas	< 800 mPas
Reaction time at 25°C	35-55 [s]	60-100 [s]
Foaming factor	1.0 – 1.2	1.3 – 2.4
Maximum reaction temperature	< 130 [°C]	< 150 [°C]
Flammability	self-extinguish	self-extinguish
Compression strength at foaming factor 1x	>60 [MPa]	>15 [MPa]
Flexural strength at foaming factor 1x	>60 [MPa]	>15 [MPa]

## **APPLICATION METHOD**

The adhesive is pumped into the rock mass with injection techniques. Using a pump-set, the components (in a volume ratio of 1:1) are fed via a static mixer. While reacting, the adhesive penetrates the gaps and fissures within a few meters from the injection hole, where it hardens and thus strengthens and seals the rock mass. For details, please see the Application Instructions.

## **SAFETY INSTRUCTIONS AND LIMITATIONS**

When applying the product, use standard PPE meant for work with chemicals: safety gloves and goggles, protective clothing etc. Immediately change the clothes if they become soaked with components. For detailed safety information please see the Material Safety Data Sheet.

Failure to follow the application equipment operating manual and particularly its poor technical condition, insufficient cleaning and lack of maintenance, leads to a change in the ratio of supplied components which reduces bonding effectiveness or makes bonding completely impossible.

Remove adhesive spills with area larger than 100 cm<sup>2</sup>, if such appear during application. The Ekopur adhesive must not fill voids.

## **PACKAGING AND TRANSPORTATION**

Adhesive components are packed into barrels/canisters with a capacity of 20 or 30 litres. Containers are delivered on pallets. After arranging with the customer, the material can be delivered in alternative packages (for instance 200 litres barrels or 1000 litres containers).

## **STORAGE AND SHELF LIFE**

The components A and B shall be stored in airtight containers and in dry and well-ventilated areas at 10 - 30 °C.

The warranty period for properly stored components (A and B) is 6 months.

## **DISPOSAL**

Follow local regulations.

## **APPROVALS AND CERTIFICATES**

1. Certificate - safety mark "B"
2. Hygienic assessment (PZH)

## **DISCLAIMER**

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## **ADDITIONAL DOCUMENTATION**

- EKOPUR MT 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
- UNITED KINGDOM: Minova Weldgrip Ltd.;  
Minova International Ltd.
- APAC: Minova Australia Pty Ltd.
- AMERICAS: Minova USA Inc.

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