

**MINING**

**EKOFLEX**

**PHENOLIC FOAM**

**DESCRIPTION**

Ekoflex is a two-component foam, obtained after mixing component A (aqueous solution of phenol-formaldehyde resin) and component B (aqueous solution of organic and inorganic acids) in a volume ratio of 4:1. The foam property allows use under various geological and mining conditions. Three types of Ekoflex are offered which differ with foaming factor.

**APPLICATION AND USE**

Ekoflex is used for fire and methane hazard prevention by filling voids, sealing mined-out openings & walkways. It can also be used to build or seal insulation and ventilation dams.

**ADVANTAGES**

- High efficiency
- Low content of free formaldehyde
- Ability to use under a wide range of geological and mining conditions
- Low reaction temperature
- Good gas-insulation
- Does not disturb gas indicator readings;
- Ability to use in environments where fire hazard occurs



**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**

Parameter	Ekoflex Low foamed version	Ekoflex Medium foamed version	Ekoflex High foamed version
Foaming factor	May-17	13 - 32	28 – 40
Reaction time - start	< 4 [s]	< 4 [s]	< 4 [s]
Reaction time - setting	< 4 [min]	< 4 [min]	< 4 [min]
Free HCHO content	< 0,1 [%]	< 0,1 [%]	< 0,1 [%]
Compressive strength at 10% deformation	≥ 0,3 MPa	≥ 0,1 MPa	≥ 0,02 MPa
Flammability	self-extinguish	self-extinguish	self-extinguish
Anti-electrostatic	dissipative	dissipative	dissipative

## **APPLICATION METHOD**

Phenol-formaldehyde foam is supplied through a pump-set with a component volumetric pumping ratio of 4:1. During the pumping, the components are mixed in a static mixer and form foam, which hardens within a few minutes. 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 technical condition, insufficient cleaning and lack of maintenance can lead to a change in the ratio of the supplied components which then reduces the effectiveness of foaming or makes it completely impossible. In consequence, the obtained foam might have inadequate parameters (non-homogeneous structure, inadequate foaming factor, reduced durability). Do not use in poorly ventilated areas.

## **PACKAGING AND TRANSPORTATION**

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

## **STORAGE AND SHELF LIFE**

Shelf life 2 months for component A and 6 months for component B when stored in dry and cool conditions (between 10 and 20°C).

## **DISPOSAL**

Follow local regulations.

## **APPROVALS AND CERTIFICATES**

- Certificate - safety mark "B"
- Hygienic assessment (PZH)

## **DISCLAIMER**

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NS/TE/02/2016/004,005,050,051,058.059/ Ekoflex (November 2016)

## **ADDITIONAL DOCUMENTATION**

- Ekoflex MSDS

## **LIST OF REPRESENTATIVES**

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- CZECH REPUBLIC: Minova Bohemia s.r.o.
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- 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.
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