MINOVA

GEOFLEX BB
(BALLAST BOND)

TWO-COMPONENT
SILICATE-ISOCYANATE RESIN

DESCRIPTION

GeoFlex BB is a non-foaming, low viscous, elasticised two-component silicate-isocyanate resin with high bond strength. GeoFlex BB Component A is a special sodium silicate with additives. GeoFlex BB (ballast bond) Component B is a modified polyisocyanate. The curing of Component A results in a silicate; simultaneously a solid polyisocyanurate/polyurea is formed from Component B. The mixture of these two components creates a tough, elastic, solid silicate resin (organic-mineral resin).

APPLICATION AND USE

- Consolidating loose material (ballast bonding)
- Pavement stabilisation and protection against erosion
- Solidification and stabilisation of the faceto-track transition
- Strengthening of construction structures (e.g. gabions walls)
- Strengthening of rock mass by grouting

ADVANTAGES

- Rapid curing gives very high final hardness of the resin in a very short time (approx. 30 min after application depending on temperature)
- Excellent penetration depths due to low initial viscosity
- Resistant to dynamic load
- Very good adhesion in dry conditions
- Cured GeoFlex BB (ballast bond) is resistant against acids, alkali (sodium hydroxide, sulfuric acid 10 %), salt solutions and many solvents

Fire classification according to DIN EN 135011: B – s2, d0

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.

MATERIAL DATA

PARAMETER	UNIT	COMP. A	COMP. B	STANDARD
Density at 25°C	kg/m³	1460 ± 30	1120 ± 20	DIN 12 791-1
Colour	-	Yellowish	Black	-
Flash point	°C	-	> 100	DIN 53 213
Viscosity at 15°C	mPa*s	260 ±40	160 ± 60	DIN EN ISO 3219

REACTION DATA

INITIAL TEMPERATURE	25 °C	STANDARD
Setting time	6 min 30 s ± 30 s	MCT PV 10-304
Foaming factor	1	MCT PV 10-304
Max. reaction temperature	105 °C	MCT PV 10-314

MECHANICAL DATA

PARAMETER	UNIT	VALUE	TEST METHOD
Compressive strength	MPa	> 22 (24 h)	DIN EN ISO 604
Compressive strength	MPa	> 27 (4 w)	DIN EN ISO 604
Shore D	-	> 50	ISO 7619-1
Diffusion resistance factor (water vapour diffusion)	MPa	1,9 x 10^3	ISO 7783
E-modulus *	MPa	>250	DIN EN ISO 178

* (24 d, 23°C, 50%rel. humidity)

APPLICATION METHOD

The two components are pumped by a dual component pump at the volume ratio of 1:1.

GeoFlex BB (ballast bond) is applied directly to the surface by spraying penetration or into the rock mass or construction using grouting methods utilising an injection lance and where necessary an injection packer.

Once the components have been thoroughly mixed, the viscous emulsion that results is immiscible with water and does not absorb any water (e. g. from the surrounding soil or rock strata). Due to its density, it tends to sink in water.

It needs to be assured that the product temperature is between 15°-30°C before processing and during application.

When the material is warmed up, local overheating, e. g. at the container wall, must be avoided by any means.

SAFETY INSTRUCTIONS AND LIMITATIONS

Observe the usual precautionary measures for handling chemicals, see MSDS of GeoFlex BB (ballast bond) A- and B-component.

If the product is strong cooled down (< 0 °C) or at short notice lower temperatures (< -10 °C), it should be warmed up before application to the recommended processing temperature

When the material is warmed up, local overheating, e. g. at the container wall, must be avoided.

We recommend an application on dry ballast, since the adhesion is highest here.

PACKAGING AND TRANSPORTATION

All forms of packing are approved to the danger goods regulation road, railway, domestic shipping.

The components can be delivered in 20/26/200/1000 l units.

Other packaging units are available on request. Details are shown in the offer.

STORAGE AND SHELF LIFE

At least six months from date of delivery when stored in a dry place between 10 °C and 30 °C. When this time is exceeded, we recommend having the material checked by Minova for compliance with specification.

The local legislation on storage needs to be considered.

DISPOSAL

Follow local regulations.

APPROVALS AND CERTIFICATES

1. Test report about the examination of GeoFLex BB on groundwater compatibility
   (Hygiene Institute, Gelsenkirchen, 2016)

2. Report of the classification of the reaction to fire behaviour - Reaction to fire classification according to DIN EN 13501-1 (Report 230010797-2, MPA Erwitte, 2017)

ADDITIONAL DOCUMENTATION

> MSDS of GEOFLEX BB (ballast bond) comp. A
> MSDS of GEOFLES BB (ballast bond) comp. B

MANUFACTURER

Minova Ekochem sp.z o.0
An ISO 9001:2015
Quality Management Certified Company
Certificate No. FM 686583

CUSTOMER SERVICE

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