

MINING / CONSTRUCTION

CarboThix 2/Standard

TWO-COMPONENT SILICATE RESIN

DESCRIPTION

CarboThix 2/Standard is a patented, instantly thickening, fast curing two-component silicate bulk resin for grouting of bolts.

Component A is a special sodium silicate with additives. Component B is a modified polyisocyanate.

Suitable for anchoring of bolts in the mining and construction sectors.

Used with Minova's hollow bolts as part of UniPass Bolting Technology.

APPLICATION AND USE

- Grouting of rock bolts
- Grouting of cable bolts
- Filling of small rock fractures and voids
- Typical application temperature range: 30-50°C

ADVANTAGES

- Thixotropic property
- Fast reacting
- High strength
- Easy to pump
- Fast bolting capacity
- Full encapsulation of rock bolts
- Non-foaming
- CFC and halogen-free
- Environmentally tested
- Multiple monitoring investigations performed for occupational health limits



TECHNICAL DATA

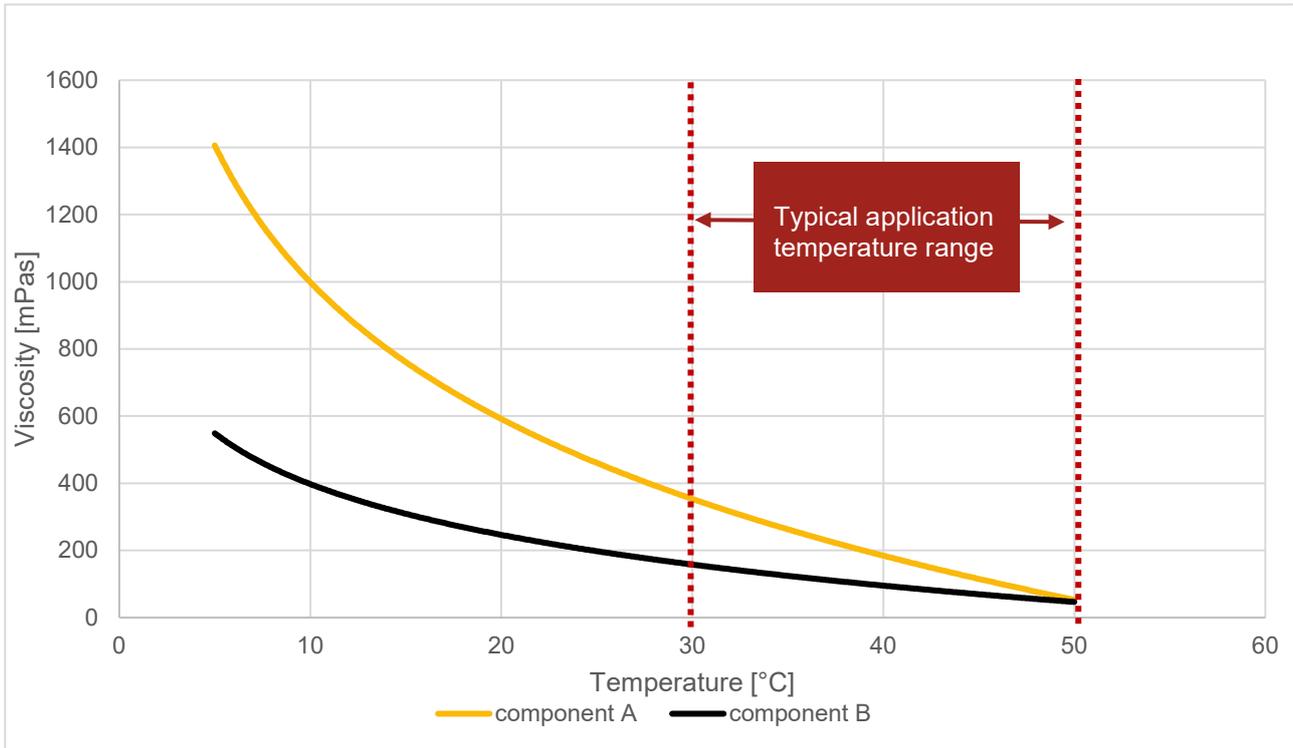
Our Minova products undergo stringent laboratory and field testing to ensure consistent and high quality.

MATERIAL DATA

Parameter	Unit	Comp. A	Comp. B	Standard
Density at 25 °C	kg/m ³	1460 ± 50	1160 ± 50	DIN 12791-1
Colour	-	brownish	dark brown	-
Flash point	°C	n.a.	> 100	EN ISO 1523
Viscosity at 25 °C	mPa*s	310 ± 50	190 ± 40	EN ISO 3219

n. a. = not applicable

Viscosity as a function of temperature (EN ISO 3219)



REACTION DATA

Temperature	Unit	Flow time	Setting time	Test method
20°C	sec	13 ± 3	465 ± 40	MCT PV 10/318
30°C	sec	6 ± 2	310 ± 30	MCT PV 10/318
40°C	sec	3 ± 1	195 ± 20	MCT PV 10/318
50°C	sec	1 ± 1	150 ± 15	MCT PV 10/318

MECHANICAL DATA

Parameter	Unit	Value	Standard
Compressive strength*	MPa	>28	EN ISO 604
Pull-out strength**	kN	> 390	DIN 21521

* at 25°C, >70% relative humidity after 24 hours

** 600 mm grouted length of 32 mm diameter SDA in a 42 mm hole after 4 h, resin temperature 30°C

APPLICATION METHOD

The two components are pumped with a dual component pump at a volumetric ratio of 1:1 and mixed through a static mixer (CarboMixer).

The optimum processing temperature for CarboThix 2/Standard is between 30 and 40°C.

If the components are cooled (below 0°C), they must be tempered before the use, to allow both components to reach the processing temperature.

Please refer to the CarboThix Product Information Document for further information.

SAFETY INSTRUCTIONS AND LIMITATIONS

Observe the usual precautionary measures for handling chemicals and refer to SDS of Component A and B.

PACKAGING AND TRANSPORTATION

All forms of packaging are approved according to the dangerous goods regulations for road, railway, and shipping – refer to Section 14 of the SDS.

CarboThix 2/Standard is delivered in 20/26/200/1000 litre units.

Other packaging is available upon request.

Please refer to the CarboThix Product Information Document for further information.

STORAGE AND SHELF LIFE

The product shelf life is 18 months from the date of production.

The warranty of the component parameters is six months from the date of delivery when stored in dry conditions, in unopened and tightly closed original containers, at the temperature between 10°C and 30°C.

Please refer to the CarboThix Product Information Document for further information.

DISPOSAL

Follow local regulations.

APPROVALS AND CERTIFICATES

1. LOBA Approval of the District Government of Arnsberg 62.12.22.67-7-4
2. Assessment of relevant combustion gases at range of high temperatures (250°C, 530°C, 725°C) acc. EN ISO 5659-2 'Plastics — Smoke generation — Part 2: Determination of optical density by a single-chamber test' + EN 45545-2 'Railway applications. Fire protection on railway vehicles. Requirements for fire behavior of materials and components'
3. Assessment of hazardous ingredients leaching + effect on micro-organisms
4. Assessment related to the long-term performance of cured resin (TOC, Loss-On-Ignition) acc. EN 13137:2001-12 'Characterization of waste - Determination of total organic carbon (TOC) in waste, sludges and sediments', EN 12879 (S 3a):2001-02 'Characterization of sludges - Determination of the loss on ignition of dry mass'

DISCLAIMER

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ADDITIONAL DOCUMENTATION

- SDS CarboThix 2/Standard Component A
- SDS CarboThix 2/Standard Component B
- CarboThix Product Information Document
- Technical handbook for the safe use of injection resins in the mining sector

CUSTOMER SERVICE

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