MINOVA

CARBOTHIX FAST

SILICATE RESIN ANCHORING GROUT

DESCRIPTION

CarboThix Fast is an immediate partially stiffening and very fast curing dual component silicate resin for bonding injection drilling anchors, also for rock stabilization and water sealing. CarboThix Fast was developed to improve the productivity of ground support installation in underground mining and tunnelling applications. Using the pumpable resin enables load to be taken up in minutes rather than the typical 24 hours from cementitious grouted systems. During application, the two components are intimately mixed and achieve a grease-like viscosity (the so called thix effect), so that the grout stops flowing and cures to form a tough elastic and non-porous resin that will not mix with water or be diluted in wet holes. Together they form an interpenetrating network, as a tough elastic non-porous silicate resin.

The resulting viscous emulsion will not take up any additional water (from the rock), will not mix with water and is resistant to dilute acids and alkalis as well as fats. As the system is under pump pressure, some grout is pushed into minor cracks and fissures around the anchor hole, ensuring full encapsulation of the anchor. As the two resin components are mixed at a set volume, consistent mixing of the grout is guaranteed, an advantage over cementitious grouts. This delivers a reliable quality of grout and anchoring performance. Operator safety and handling issues are also improved over cementitious grouting systems.

APPLICATIONS AND USES

CarboThix Fast was developed to improve the productivity of ground support installation in underground mining and tunnelling applications. The thixotropic nature of the grout as well as its resistance against water provide a unique sealing against pressurized water inflow. Typical applications of CarboThix Fast include grouting of cable bolts, steel or GFRP bolts, and sealing of roof bolts.

ADVANTAGES

- Full encapsulation of anchors
- Immediate loading capacity of the bolt
- Long distance pumping (up to 1500 ft)

APPLICATION METHOD

After thoroughly mixing the two components, the resin instantly achieves a grease-like viscosity level so that the mix stops flowing, even in large fissures, and requires pump pressure for displacement. The components are to be pumped at the volumetric ratio of 1:1 by using a dual component pump with final mixing of the materials achieved at the wand via a static mixer prior to placement. CarboThix's high strength, provides a uniform transfer of local rock stresses over the whole length of the bolt.

For bonding of injection anchors (SDA's, and hollow bar), the mixed resin is injected into the drilled hole to the maximum depth to fill the annular space and adjacent joints.

TECHNICAL DATA

The data below is laboratory data. Results may vary in practice due to thermal exchange between resin and strata, surface properties of the rock, humidity, pressure, and other factors.

TECHNICAL PROPERTIES

PARAMETER	UNIT	COMP A	COMP B
Density at 77°F (25 °C)	Kg/m³	1430 ± 50	1160 ± 50
Color		light brown	dark brown
Flash Point	°F	N/A	>212
Viscosity at 77°F (25 °C)	cps	310 ± 50	190 ± 40

REACTION DATA

INITIAL TEMPERATURE	186°F (30°C)
SOLIDIFICATION TIME	1 min – 1 min 30 sec

SAFETY INSTRUCTIONS AND LIMITATIONS

This product is designed, manufactured and sold specifically and exclusively for use in drilled boreholes in underground mining and tunneling applications. Any use of this product in wet open air outside of a fully encircled borehole is at the user's sole risk and responsibility and Minova USA, Inc. disclaims all liability.

PACKAGING AND TRANSFORMATION

CONTAINER TYPE	CARBOTHIX STANDARD / 2 COMPONENT A	CARBOTHIX STANDARD / 2 COMPONENT B
PC (Jug)	50 lbs (23 kg)	43 lbs (20 kg)
Steel Drum	620 lbs (281 kg)	529 lbs (240 kg)
IBC (Tote)	3100 lbs (1,406 kg)	2,435 lbs (1,104 kg)

Other packing units available on request.

STORAGE AND SHELF LIFE

At least 12 months from date of manufacture when stored in a dry place. If this time is exceeded, we recommend having the material checked by Minova USA, Inc. for compliance with specification. Instruction on storage conditions must be observed. Please see Safety Data Sheet (SDS) recommendations for product handling and storage

DISPOSAL

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

MANUFACTURER

Minova Canada Inc
An ISO 9001:2015
Quality Management Certified Company
Certificate No. FM 686583

Original Registration Date: 1995-02-15
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By Royal Charter

CUSTOMER SERVICE

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DISCLAIMER