

SOFT ROCK MINING / HARD ROCK MINING

CARBOTHIX 1:2 SLOW SET

TWO COMPONENT GROUTING RESIN

DESCRIPTION

Carbothix Slow Set consists of two resin/hardener components, A and B. Component A is a specifically designed sodium silicate in water solution. Component B is a modified polyisocyanate.

When intensively mixed together via a specialised static mixer from the metered pumping system the mixture thickens very quickly to form a tough interpenetrating network of non-porous elastic silicate or organomineral resin. This minimises leakage from the bolt hole, displaces drilling water helping to ensure full encapsulation. After the two components have been effectively mixed, the resulting viscous emulsion will not absorb any water.

ADVANTAGES

- ▶ Immediate thickening minimizing leakage from bolt hole
- ▶ Injection quantity can be adjusted when fractured ground is encountered
- ▶ Carbothix is resistant to dilute acids and alkalis as well as fats
- ▶ German LOBA approval
- ▶ High flash point of each component
- ▶ Can be pumped long distances
- ▶ No fillers – reduced pump wear
- ▶ Less dependent on operator – no specific spin time required
- ▶ Effective mixing of both components guaranteed
- ▶ Improvement in productivity
- ▶ Safer

APPLICATION AND USES

Grouting resin used for anchoring bolts/cables used for strata/rock support and reinforcement in coal and hard rock mines.



Figure 1: Carbothix A and B

TECHNICAL DATA

	Component A	Component B	Standard
Density Kg/m ²	1445+/-50	1150+/-25	DIN 12 791
Colour	Light brown	Dark brown	-
Flash point °C	-	> 140	DIN 53 213
Viscosity @ 25°C mPas	320-420	250-350	ISO 3219

Test Data

Tests performed at 22°C

Punched Shear Strength (MPa)	15 mins	12
	1 hour	20
Gel Time (secs)	49	
Cure Time: Penetrometer hardness test (secs)	86	

Note: The properties listed are an indication only, and may vary with temperature, mining conditions, strata conditions, equipment, bolt hole annulus, injection quantity etc.

APPLICATION METHOD

The two components are pumped by a dual component SK90 gear pump or PHP Pump, with volume flow of 4-6 litres/minute, at the volumetric ratio of 2:1 Part B : Part A, usually through a specially designed grouting head to keep both components separated and mixed thoroughly via a specially designed static mixer.

PACKAGING AND TRANSPORTATION

Pack Size

Carbothix- Component A
19 litres per steel pail (weight 24 kg)

Carbothix- Component B
19 litres per steel pail (weight 19 kg)

Above steel pails are normally supplied in banded, lockable steel PODS.

Other packaging options available on request.

STORAGE AND SHELF LIFE

At least six months from date of delivery or twelve months from date of production when stored in dry conditions.

If this time is exceeded, it is recommended having the material checked by Minova for compliance with specification.

STORAGE CONDITIONS

Part B is packed under nitrogen, and after opening should be purged with nitrogen before storage.

HEALTH AND SAFETY

For further information see the relevant material safety data sheet, copies of which are available on our website.

TECHNICAL SUPPORT

We provide technical advisory service by a team of specialists in the field. The service includes on site assistance and advice on evaluation trials and laboratory work.

MANUFACTURER/DISTRIBUTOR

Minova Australia Pty Ltd

An ISO 9001:2015 Quality Management Certificated Company.



FS 603747

ADDITIONAL INFORMATION

Started more than 40 years ago, Minova is a global manufacturer and supplier of chemical and mechanical earth control products, adhesives and support equipment. With manufacturing plants on five continents and operations in more than 25 countries, Minova is an industry-leading provider of ground support solutions for the underground mining, construction, tunnelling and civil engineering industries.

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- ▶ Resin anchor systems
- ▶ High yield grouts and foams
- ▶ High volume output grouts
- ▶ Monolithic chock systems
- ▶ High performance cable bolt grouts
- ▶ Polyurethane resin systems
- ▶ Binder systems and accelerators for backfilling
- ▶ Pre-packaged high build spray cements
- ▶ Sprayable coatings for ventilation control
- ▶ Water stop grouts
- ▶ Ventilation formwork systems including: Meshblock, Gunmesh, Tecmesh and Tecplastic
- ▶ Grout mixers and batchers both air and hydraulically operated
- ▶ Flexible high strength membrane for strata support
- ▶ Contract Installations
- ▶ Flexible membranes for strata support and waterproofing applications

CUSTOMER SERVICE

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