

Carbostop 1C

Injection Resin for Tunneling and Underground Engineering



Solutions from Materials Technology





Pumps HD 1 and CT-ET I for use with Carbostop



Characteristics of Carbostop



Characteristics

Carbostop (1C) is a semi-rigid polyurethane foam which accommodates considerable movement between construction components without losing its functional capability. This Minova product is well suited for stopping water seepage and for consolidating loose rock formations. In the presence of water, all Carbostop (1C) resins react to form products with various degrees of foaming.

A high expansion factor is needed when using Carbostop (1C) to seal construction cracks in concrete, while a low expansion factor is useful for consolidating loose soils.

Applications

- Sealing construction pit boundaries such as sheet pilings, bored pilings, diaphragm walls
- Sealing of anchor heads
- Sealing structural cracks in concrete and brickwork
- Sealing of casting joints
- Consolidation of granular soil and loose rock

Benefits

- Carbostop (1C) has good adhesive properties with both metallic and mineral surfaces
- Easy penetration into wet sand, giving near-concrete hardness
- No shrinkage
- Due to the expansion of Carbostop (1C) resin (expansion factor up to 50), the material requirements and the associated costs can be kept low
- No CFCs or solvents
- The resins are resistant to the influence of sulphates, acids, alkaline solutions, and micro-organism contamination
- Tests have demonstrated the resins to be ecologically harmless
- Low viscosity
- Only one component (Carbostop U)
- Adjustable reaction times

	CarboStop F	CarboStop U	CarboStop W
Description	Low viscous water-reactive single-component resin, free of CFC and phthalate plasticizers, can be catalyzed with CarboAdd	Water-reactive 1C resin with integral catalyst, free of CFC and phthalate plasticizers, ready for use without mixing, can be catalyzed with CarboAdd	Water-reactive single-component resin, free of CFC and phthalate plasticizers, can be catalyzed with CarboAdd
Reaction data at 25°C (77°F)			
Start of foaming	0'07" ± 2"	0'20" ± 5"	0'08" ± 2"
End of foaming	0'38" ± 10"	2'00" ± 15"	0'35" ± 10"
Foaming factor	40 - 45	30 - 50	35 - 45
Material data at 25°C (77°F)			
Density	1130 ± 30 kg/m ³ 70.5 ± 1.9 lbs/ft ³	1150 ± 40 kg/m ³ 71.9 ± 2.5 lbs/ft ³	1140 ± 30 kg/m ³ 71.1 ± 1.9 lbs/ft ³
Viscosity	160 ± 40 mPa*s (cps)	350 - 1000 mPa*s (cps)	250 ± 50 mPa*s (cps)

Equipment and Test Reports



Equipment

Carbostop (1C) is injected using single-component grouting equipment. Minova offers complete injection systems consisting of the following:

- single-component injection pump (pneumatic or electrically driven)
- hoses and accessory modules





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