Quickmast 130-AC

Elastic methacrylate based injection system

DESCRIPTION

Quickmast 130-AC is a three component (optional four), low viscosity hydrophilic methacrylate based injection system with adjustable reaction time and controlled setting time.

Quickmast 130-AC is used for permanent and effective sealing and consolidation works in presence of water. The compound gels in a few seconds to a few minutes when an activator or initiator is added just before use.

Quickmast 130-AC reacts to produce a soft, elastic and tacky crosslinked gel. In wet or dry conditions, the volume of the gel increases or decreases in a reversible manner assuring perfect waterproofing.

APPLICATIONS

- Injection of wet and water bearing cracks in all types of structural concrete elements.
- Injection of grout injection hoses.
- Sealing of voids, cavities, and construction joints in concrete.
- Sealing and treatment of water infiltration and ground water ingress.

ADVANTAGES

- Excellent bond strength to concrete.
- Low viscosity, high fluidity system, formulated to allow small cracks penetration.
- Non-toxic, odorless, water-soluble material.
- Re-swelling possibility upon contact with water, the volume of the gel increases or decreases in a reversible manner assuring perfect waterproofing.
- Adjustable reaction and setting time.
- Elastic, can absorb limited movements when a polymer is used (B2 component - optional).

METHOD OF USE

SUBSTRATE PREPARATION

The substrate should be cleaned from dust, oil, plaster, grease, curing compound, and corrosion deposits.

MIXING

Quickmast 130-AC comprises three (optional four) components:

- A1 component: Resin
- A2 component: Catalyst, a liquid activator for standard setting times between 10 seconds and 30 minutes.

TECHNICAL PROPERTIES:	
Appearance:	Blue liquid
Density:	1.20 ± 0.1 g/cm^3 @ 20°C
Viscosity: EN ISO 3219	10 - 30 mPa.s @ 20°C
Dry wet cycles: EN 14498	Complies
pH:	6.5 - 7
Resistance to pH:	Up to 12

- B1 component: Initiator, in powder form to be dissolved in water at a ratio of (0.5 - 5%) depending on the setting time required.
- B2 component (optional): Liquid polymer, in which (B1) component can be dissolved instead of water, in order to get an acrylic gel with higher mechanical properties for sealing off live cracks.

The following mixtures need to be prepared in two separate opaque plastic containers each with a lid:

Mixture 1: Resin (A1) & Catalyst (A2)
Mixture 2: Initiator (B1) + Water (20 kg)

Reaction time with different Initiator (B1) mixing ratios:

B1% / temp.	0.5%	1%	2.5%	4%	5%
5°C	46' 33"	23' 49"	12' 51"	8' 20"	6' 45"
10°C	35' 14"	18' 45"	12' 15"	5' 49"	4' 19"
15°C	24' 37"	12' 36"	10' 01"	4' 02"	3' 00"
20°C	15' 55"	9' 12"	7' 19"	3' 01"	2' 12"
25°C	12' 28"	6' 55"	3' 19"	2' 25"	2' 01"

Note: The above data was developed under controlled laboratory conditions, expect some variations depending on the object and conditions on site.

(Mixture 1 & Mixture 2) are then mixed in 1:1 ratio by volume. Take an equal volume of each mixture and check the setting time after mixing. Adjust the ratio if necessary. Only stainless steel or plastic containers can be used (PVC, polyethylene, polypropylene).

- (Mixture 1) is stable for at least a few hours, if kept covered in a cool and dry place.
- (Mixture 2) is stable for a few days below a temperature of 25°C.

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INJECTION

For all types of setting, the use of a two component methacrylate pump is recommended.

Set the pump to work at a ratio of 1:1 by volume. Directly load equal amount of the pre-mixed (Mixture 1 & Mixture 2) in a ratio of 1:1 by volume into the storage container of the pump.

REMARKS

- At low temperature, gelling slows down but still fast even below 0°C.
- In acid conditions, the reaction is slowed down, while under alkaline conditions the reaction is speeded up.
- The presence of minerals and metals (specially iron and copper) may increase or decrease the rate of setting, depending on their concentration.
- When Quickmast 130-AC is immersed in water, the unconfined gel can absorb up to 2 times its own weight of water in a few weeks without cracking.
- Under humid conditions, the volume of the gel will remain approximately constant.
- In the absence of water, the gel will slowly shrink, without cracking. These dimensional changes are reversible and do not degrade the gel.
- The viscosity of Quickmast 130-AC solution will depend on the temperature and dilution. It will remain constant up to the setting point.
- Do not add more than three volumes of water. Depending on the conditions of the injected substrate, the quantity of water present in the injection solution may be up to 3 times the volume of resin.
- For better control of dry-wet cycles and increased durability, B2 polymer - optional component should be used as one of the components.

CLEANING

The equipment can be cleaned and rinsed with clean water.

PACKAGING

Quickmast 130-AC is available in:

- A1 component (resin): 20 kg
- A2 component (catalyst): 1 kg
- B1 component (initiator): 1 kg
- B2 component (polymer): 20 kg – [optional].

STORAGE

Quickmast 130-AC has a shelf life of 12 months from date of manufacture if stored at temperatures between 5 and 25ºC in dry conditions and original sealed containers and away from direct sunlight.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

CAUTIONS

HEALTH AND SAFETY

Consult the appropriate Material Safety Data Sheet prior to using Quickmast 130-AC.

FIRE

Quickmast 130-AC is nonflammable.

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