



MAXURETHANE[®] INJECTION

TWO-COMPONENT POLYURETHANE WATER CUT-OFF AND SOIL STABILISATION GROUT SYSTEM

DESCRIPTION

MAXURETHANE INJECTION is a two-component polyurethane system based on pre-polymers which, upon contact with water, react to foam while expanding its volume up to 15 times.

It is a water reactive, non hydrophilic but hydrophobic resin type, thus the resulting foam does not absorb water and will not be affected by water dryness: it will not shrink or swell. The gel time of the product is adjustable by adding a certain percentage of MAXURETHANE INJECTION CAT.

MAXURETHANE INJECTION is either used to cut-off water or for soil stabilisation.

USES

- Water cut-off in:
 - Defective, cracked or honeycombed concrete.
 - Construction and expansion joints in concrete.
 - Brick constructions.
 - Waste water tanks and drinking water reservoirs.
 - Sewers. Manholes. Utility boxes. Tunnels. Dams.
- Filling of large cavernous spaces and cracks in stones or concrete structures.
- Soil stabilisation.

ADVANTAGES

- Just requires single-component injection equipment. It reacts with the flowing water or humidity present in the soil.
- Low viscosity, even during injection procedure, which ensures good and deep penetration.
- High performances. Water will not dilute it.
- High expanding ratio, up to 15 times.
- Non shrink.
- The stability of the chemical structure of the foam provides high durability, high mechanical strengths, and capability to withstand heavy water pressures.
- Environmental friendly.

- Gel time adjustable depending on the percentage of MAXURETHANE INJECTION CAT added.

APPLICATION INSTRUCTIONS

See technical recommendations for injection procedure detailed in the “Introduction to MAXURETHANE INJECTION system”.

Both components of MAXURETHANE INJECTION are supplied in 25 kg. drums, and should be mixed in the ratio indicated below or as in the enclosed table. The accelerator MAXURETHANE INJECTION CAT is supplied also separately to allow adjustment of the gel time and to provide a longer shelf life. Pour two parts by weight of component A for each part of component B in a clean, dry container and mix homogeneously. Then, add the accelerator in the desired proportion.

A mixing ratio between 2% and 10% of accelerator / resins is recommended, being the optimum proportion checked on site: In critical high pressure water intrusions will react aggressively on contact with water when catalysed at 10%. A slightly catalysed product at 2% assures on the opposite good penetration results when injecting very fine capillary cracks.

Observe temperature and humidity of the environment because both will determine the pot life of the already mixed batch. The higher the temperature and the higher the relative humidity, the less accelerator is required. Since MAXURETHANE INJECTION can react with the humidity of the air, it is advisable to prepare the mixture –in particular the addition of the accelerator- only immediately before the injection is about to start. Mix just the quantity that the equipment is capable to inject in a reasonable time depending on the conditions. Nevertheless, already mixed and catalysed resin could be stored for a few days in bottles or pails if perfectly closed.

Since MAXURETHANE INJECTION components react mainly with the moisture existing in the substrate to be injected, the system is suitable for single component injection equipment. Hydrophobic grouts do not need large amounts of water for the reaction unlike hydrophilic materials: simultaneous injection of water is not necessary. Only if the area of application seems to be dry, pre-injection of water is recommended.

It is essential to keep the equipment absolutely dry. Prevent any moisture from getting in contact with the mixture to avoid premature reaction of the product. If the reaction of the batch occurs while pumping immediately shut down machine and flush with MAXURETHANE INJECTION CLEANER to avoid built-up and clogging of the equipment.

CAUTION

Tools and mixing equipment are best cleaned immediately after use. DRIZORO provides MAXURETHANE INJECTION CLEANER to avoid built up and clogging of the equipment. Circulate cleaner through pump for several minutes.

SPECIAL CAUTION

Protect your health. Safety goggles, gloves and safety clothing must be worn at all times. While injecting, a full face shield is strongly recommended. Spills and blow outs could happen the same as in any other pressure injection job. In case one of the components comes in contact with skin, wash thoroughly with soap and water.

Provide adequate ventilation in volume and pattern in the working area.

PACKAGING

MAXURETHANE INJECTION components A and B are supplied in 25 kg. and 5 kg. drums.

MAXURETHANE INJECTION CAT is available in 25 and 5 kg. drums.

MAXURETHANE INJECTION CLEANER is supplied in 25 and 5 kg. drums.

ACCESORIES

DRIZORO can supply injection equipment consisting of manual and electric-drill powered pumps, injection packers and pressure hoses, etc.

STORAGE

6 months in their original, unopened containers.

TECHNICAL DATA

Physical characteristics of components

	Component A	Component B
Mixing ratio by weight	2	1
Mixing ratio by volume	1.62	1
Appearance	Viscous liquid	Viscous liquid
Colour	Dark brown	Clear
Specific weight gr./ml. (20°C)	1.23	1.00
Freezing point °C	Crystallisation below +10	-31 °C
Flash point °C	>200	>200
Storage temperature °C	20/35	10/20

Physical characteristics of foam (reaction at 20°C and 50% R.H.)

Induction time (sec) CAT 2% / 5% / 10%	80 – 90 / 40 – 45 / 20 – 25
End of reaction (sec) CAT 2% / 5% / 10%	4 min / 140 – 160 / 80 – 90
Expansion rate	10-20
Density in free foaming kg/m3	50-100
Compressive strength (kg/cm3) Depending on type of sand injected	30- 150
Toxicity (cured foam)	None
Solubility in water	None
Chemical resistance	Most organic solvents, mild acids, alkali and micro organisms

GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. DRIZORO reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product.



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