



MAXINJECTION®

12

ULTRAFINE CEMENT FOR INJECTIONS

DESCRIPTION

MAXINJECTION® 12 is an ultra-fine cement being the maximum size of grain equivalent to 12 microns. Slurries prepared with **MAXINJECTION® 12**, with a small addition of **MAXINJECTION® 12 LIQUID** superplasticiser, will show a very high penetration which exceeds those that can be obtained with conventional cement/bentonite slurries.

APPLICATION FIELDS

- Injection of underground structures (tunnels, subways, undergrounds).
- Restoration of monumental public works (bridges, aqueducts, dams).
- Specialised foundations.
- Applications in oil industries and petrochemical plants.
- Consolidation of fine sand soils.
- Injection of cracked concrete, rocks, etc.

ADVANTAGES

- Slurries can be injected in soils showing approximate permeability of 10-4 m/s. The injectability is similar to medium-hard sodium silicates and much better than the one showed by cement, cement/bentonite mixes and hard sodium silicates.
- Due to its chemical stability, injection will not contaminate ground water table.

- Will resist aggressive environments (Water with sulphates, acid waters, chlorine...)

APPLICATION INSTRUCTIONS

Slurries prepared with **MAXINJECTION® 12** will be made following the same procedure as established for conventional cement-based injection slurries.

Equipment will include:

- High-turbulence mixer.
- Homogenisation tank.
- Injection pump.

The superplasticiser admixture is mixed with water at the proper ratio and then the resulting mixture will be mixed with **MAXINJECTION® 12**. Refer to data tables for different mixing ratios.

PRECAUTIONS

- Wash adequately skin and/or clothes in case of contact with slurry.
- Use protective glasses.

PACKAGING

MAXINJECTION® 12 is supplied in 25 kg bag.

MAXINJECTION® 12 LIQUID is supplied in 25 kg jerrycan.

TECHNICAL DATA

Glanulometry curve	
Size (microns)	Percentage (%)
1	15
2	28
3	38
5	60
10	95
12	100
Chemical analysis	
Component	Percentage (%)
Si O ₂	30
Al ₂ O ₃	9,5
Fe ₂ O ₃	1,5
CaO	45,5
SO ₃	2
Apparent density (g/cm³)	
	0,7
Volumetric mass (g/cm³)	
	2,93

Fluidity (Marsh cone)	
W/C ratio	Time (sec)
0,8	35
1	32
1,5	30
2	29,5
3	29

Reference value: Water=27 sec.

Using 4% superplasticiser

Viscosity	
W/C ratio	CPo
0,8	8
1	6
1,5	3
2	3
3	3

Measured with a FANN type viscosity meter

Compressive strength of sand sized 0,1-0,4 mm after injection	
W/C ratio	Mpa
1,5	11
2	10
3	8

4% superplasticiser used
Measured after 28 days

Mixing examples				
W/C	Composition per m ³			Density
	MAXINJECTION [®] 12 (kg)	Water (l)	Liquid Additive (kg)	
0,8	857	685	34	1,57
1	745	723	30	1,5
1,5	548	800	22	1,37
2	430	842	17	1,29
3	300	890	12	1,2

4% superplasticiser used

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 price. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.



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