ROCK GROUT BB80

High Performance Non Shrink Expanding Cementitious Grouting Mortar

Product Description	ROCK GROUT BB80 is a high performance, shrinkage compensating, ready to use grouting mortar. Consisting of: A blend of cement & fillers, Properly graded quartz aggregates, And Special additives. When mixed with water, the product forms a fluid grey coloured grout (similar to concrete color).
Uses	Anchorage of bolts or iron bars in concrete. Precision grouting for industrial equipment's, subject to shocks and vibrations. Grouting of railway rails or travelling crane tracks. Grouting for turbines, alternators, compressors, generators, machine tools. Beam keying or bridge springier support construction. Assembly of metal reinforced concrete or prestressed concrete prefabricated elements.
Advantages	ROCK GROUT BB80 is chloride free and contains no metal particles. Consequently, it does not oxidize when in contact with humidity. Instead it protects metal parts from corrosion owing to its high alkaline Ph. It has a unique 2-stage shrinkage compensating system, with a very special blend of shrinkage and water reducing, plasticizing agents, offering the following beneficial properties: High mechanical compressive and bending resistances. Adheres to concrete, mortar and steel, ensuring a monolithic bond. Can be pumped, injected, vibrated or compacted. It's not altered by large humidity or temp. variations. Resistant to water and oil penetration. High initial strength reduces down time requirement.
Approvals / Standards	U.S. Corps of Engineers: CRD C-621 expansion percent. ASTM C-1107 for 2 stage expansion Grout Grades B+C. British Standards for compression, bond and flexural.

Product Data	Grey Powder		
Appearance / Colour			
Packaging	25 kg paper bags		
Storage Conditions / Shelf Life	12 months from date of production if stored properly in unopened and undamaged original well sealed packing, protect from damp and high humidity conditions.		
Technical Data	Cement, selected fillers & aggregates and special additives		
Base			
Density (at 20º C)	approx. 2.2 kg/l (of the fresh mortar)		
Setting Time (at 20º C)	Initial Set Final Set	Plastic 1.40 hrs 3.10 hrs	Flowable 5.00 hrs 8.30 hrs

Al-Obour Buildings - Salah Salem Road - Nasr City - Cairo - Egypt.
10th Of Ramadan City.
info@CityChem.net @City_Chem City Chem
+202 240 456 35
+2010 277 810 11
+2010 672 213 44

Mechanical / Physical Properties

Compressive Strength (kg/cm^2)

Test Sample Age in days	Consistency	
	Plastic	Fluid
1	300	250
3	400	380
7	430	410
28	550 - 600	550

Flexural Strength (kg/cm^2)

Test Sample Age in days	Consistency	
	Plastic	Fluid
7	33.5	43
28	110.5	118

Pull out Strength (kg/cm^2)

Test Sample Age in hrs	Fluid Consistency	
	Tore steel	Smooth Steel
24	55	20
28	110	40

Note: Rock Grout BB steel adherence values in plastic consistency are equal to or greater than the above values.

Adding Fillers

For large scale grouting projects, silica sand and gravel can be added to Rock Grout BB where the added aggregate must be clean and properly graded.

Example: 12.5 kg of sand graded 1-10 mm to one 25 kg bag of Rock Grout BB mixed with 3.5 – 4 lts. of water, yield a grout with the following approximate mechanical strengths:

Test Sample Age in days	Compressive Strength (kg/cm^2)	Flexural Strength (kg/cm^2)
1	250	-
7	360	40
28	580	114

Do not exceed 25 kg of sand per bag Rock Grout BB: sand = 1:1 by weight)

Note: Expansion decreases when the proportion of sand added increase.

Application Details

Ambient Temperature

Minimum application temperature: + 5 °C.

Mixing Ratio

Depending on the amount of mixing water used a fluid or plastic mortar will be obtained:

Ambient Temp. degree C.	Consistency	
	Plastic (lt/25kg)	Fluid (lt/25kg)
5	2.25	3
20	2.5	3.25
35	2.7	3.5

The above proportions should be complied with to avoid bleeding.

Surface Preparation

The substrate must be properly prepared and free of dust and grease. Remove any losses particles which could affect the final ultimate bond strength.

Moisten concrete or mortar substrate for 12 hrs. before applying Rock Grout BB (surface saturated dry condition). This is extremely important during hot weather applications.

Mixing

Blend in a mechanical mixing device, preferably in a vertical-axis mixer or in a fully – opening container, using a slow- rotating electric or pneumatic stirring drill (approx. 300 rpm).

Prepare the amount of water required to obtain the right consistency (refer to mixing ratio). Pour approx. 2/3 of the mix water into the mixer and gradually add Rock Grout BB this will help to avoid making lumps. Then pour in the rest of the water and let mix for a minimum of 3 minutes from the time the last water was added to the mix.

NOTE: Hand mixing does not ensure proper dispersion and is not recommended.