



Product Description

BCI-P100 is supplied as a powder admixture. The material is a combination of a plasticising agent and a gas producing expansion medium. The plasticising agent allows the use of a reduced water/cement ratio with consequent increased strengths and durability. The expansive medium counteracts the natural settlement and plastic shrinkage of the grout and aids stability and cohesion.

Sufficient restrained expansion is developed to ensure a high degree of inter-facial contact.

Uses

BCI-P100 is an admixture for cementitious grouts where a reduced water/cement ratio and positive expansion is required. Applications include bed grouting, duct grouting, non-shrink infilling and jointing.

Advantages

- Gaseous expansion system compensates for plastic shrinkage and settlement in properly designed cementitious grout.
- Reduced water/cement ratio mixes in the grout mix ensures low permeability and long term durability in service.
- Gives high grout fluidity with low water/cement ratio, thus making placement or injection of the grout easy.
- No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.
- Composition allows high early strength development in grouts, without the use of chlorides.

Specification

Performance specification

All grouting (specify details and areas of application) must be carried out with a cement based grout incorporating a plasticised, expanding powder admixture. The admixture must be iron-free and chloride-free and shall be added to the grout in the proportions 225 g of admixture per 50 kg of cement. The admixture shall provide an expansion of up to 4% in the plastic grout, by means of a gaseous system. The admixture must be stored, handled and mixed strictly in accordance with the manufacturer's instructions.

Supplier specification

All grouting (specify details and areas of application) must be carried out using a cement based grout, incorporating BCI-P100 manufactured by Berryman Chemical India Pvt. Ltd., and applied strictly in accordance with the manufacturer's technical data sheet.

Technical Properties

Chloride content	Nil to BS 5075
Compressive strength	The plasticising action of BCI-P100 allows reduction of the water / cement ratio of cementitious grouts whilst maintaining now properties. This gives improvement in strength and long term durability when cured under restraint.
Setting times	BCI-P100 does not significantly affect the setting times of cement based grouts.
Expansion characteristics	The controlled positive expansion in unset grouts incorporating BCI-P100 overcomes plastic settlement when measured in accordance with ASTM C827. An unrestrained expansion of up to 4% is typical.
Time for expansion	15 minutes - 2 hours. Temperatures above 20°C may slightly reduce these times.
Compatibility	BCI-P100 is compatible with all types of Portland cement. BCI-P100 may be used in mixes containing certain other admixtures.



BCI- P100

Plasticised Expanding Grout Admixture

Application Instructions

Mixing

For best results proper paddle mixer must be used. For quantities up to 50 kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear vane mixer.

It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity. The selected water content should be accurately measured into the mixer. Slowly add the cement (and sand if required) and BCI-P100. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

Application

Areas to be grouted should be prepared to ensure substrates are clean, sound, and then pre-wetted. The unrestrained surface area of the grout must be kept to a minimum. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process. Adopt usual placing or pumping procedures ensuring a continuous operation.

Curing

On completion of the grouting operation, any exposed areas which are not to be cut back should be thoroughly cured by means of water application, BCI-CureCrete curing membrane or wet hessian.

Cleaning

Grouts mixed with BCI-P100 should be removed from tools and equipment with clean water immediately after use. Remove cured material mechanically.

Limitations

BCI-P100 is not compatible with High Alumina Cement.

Packaging

BCI-P100 : 225gms Sachet

Dosage

OPC	Concreting sand	Water	BCI-P100	Approx yield
50 kg	-	20-22Ltr	225gms	36Ltr
50 kg	50 kg	22-24Ltr	225gms	57Ltr

Note: For grout, mortar or concrete mixes with an aggregate/cement ratio more than 1, use 4x225gms units or 900gms of BCI-P100/100kg of cement.

Effects of Overdosing

Overdosing of BCI-P100 increases expansion and may cause frothing.

Shelf Life

BCI-P100 has a shelf life of 06 months if kept in a dry store in its original packaging. High temperature and humidity storage may reduce this period.

Health & Safety

BCI-P100 is of low hazard.

Contact with the skin and eyes, or inhalation of dust should be avoided. Wear suitable protective clothing, gloves, eye/ face protection and dust mask. After contact with skin, wash off with clean water. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.

BCI ADDITIVES INDIA LLP.

(Formerly : Berryman Chemical India Pvt. Ltd. Admixture Division)

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 www.bcia.in

Manufacturing Unit :

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- Ⓑ Goligram, Guskara Road, Near R.S. Rice Mill, Burdwan - 713 126. West Bengal.

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