

## BluCem HSI00

### High Strength Cementitious Grout

#### Description

**BluCem HSI00** is a one component cementitious powder which requires only the addition of water to form a high strength pumpable grout.

#### Uses

**BluCem HSI00** has been designed as a utility grout and is used for grout injection, reinforcement of strata and general void filling. Due to its high range of water to powder ratios it may be used in a range of applications requiring either high flow or low flow properties.

#### Advantages

- High early strength
- Thixotropic at low water ratios allowing wide application uses
- Unique expansion system making it a non shrink grout
- Excellent pumpability at high water ratios for ease of application

#### Concrete Preparation

All defective host substrate must be removed prior to application. Defective material includes cracked or structurally weakened surfaces and also chloride contaminated and carbonated concrete. A concrete corrosion expert must be consulted for critical projects or structural applications. Host concrete must be roughened and aggregate exposed to ensure good bond. High pressure water blasting or mechanical chipping of the surface is recommended for this purpose. All surfaces must be free of dust, oils and surface contaminants. This may require steam cleaning or high pressure water blasting if site conditions permit. A perimeter edge of at least 10mm depth must be provided around the area for application. Priming using **BluCem API0** is recommended. Priming by saturation of the surface using water prior to application is also acceptable. Priming with epoxy primers may be possible in certain applications where high bond strength is required, contact Bluey for further details. Application of **BluCem HSI00** must commence within 4 hours of primer application.

#### Mixing

Measure and place 80% of the specified volume of potable water to the high shear mixing vessel. Start mixer and slowly add **BluCem HSI00** powder. If powder addition is too fast then large lumps will form and final mix will be slow reaching uniform consistency. Following addition of all powder, mix for 1 - 2 minutes or until uniform consistency then add final 20% of potable water. More or less water may be added within the ratio limits specified on this data sheet. Do not mix more material than can be placed in 20 minutes.

#### Application

**BluCem HSI00** may be poured or pumped into place. Check formwork for leaks prior to mixing and application of grout. Do not exceed the maximum application thicknesses specified in this data sheet for any wet layer. Consult Bluey for further information about aggregate addition for large volume pours.

#### Curing

The surface layer must be covered until initial set to prevent surface crazing. It is recommended that the final surface finish layer is coated with curing compound or otherwise maintained wet for at least 24 hours.

#### Clean-up

Clean tools and surfaces using water prior to curing.



## Product Data

Packaging:	20kg bags
Ratio:	6 - 9 litres of water per 20kg bag of BluCem HSI00
Yield:	~ 12.5 litres per 20kg bag
Maximum thickness:	100mm in one application
Maximum exotherm:	80°C @ 100mm
Pump life:	120 minutes @ 20°C
Set time:	7 hours @ 20°C

### Mix ratios and resulting compressive strengths:

Water (litres) per 20kg bag	24 hours	7 days	28 days
6.0	50MPa	78MPa	100MPa
6.5	40MPa	70MPa	90MPa
7.0	30MPa	65MPa	82MPa
7.5	27MPa	63MPa	80MPa
8.0	25MPa	58MPa	72MPa
8.5	22MPa	54MPa	68MPa
9.0	20MPa	50MPa	60MPa

Particle size (95% passing):	45µm
Storage:	Store in dry conditions Shelf life is 12 months

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