

BLUSKY™ XCEM 60 HES

Non-Shrink Free Flow Cementitious Grout Ready To Use Cementitious High Early Strength Grout

Description

BLUSKY™ XCEM 60HES is a single component ready to use ,non shrink, chloride free, cement based free flowing high early strength and early setting grout that develops high compressive strength within 12 hours . It requires only addition of water at site. It consists of Portland cement and special chemicals to impart non shrinkage, high fluidity, high strength etc. It is a specially designed grout which gives for high early strength in comparison to the normal general purpose grouts.

- It facilitates early commissioning of equipment involving high vibration and requiring high early strength.
- Crane rail soleplates
- DG Set and pumps
- Column bases
- Bridge bearing pads.

Indicative Characteristics

Appearance	Free flowing grey powder
Typical W/P Ratio	0.15 (for Free flow mix)
Free Expansion % vol	0.2 – 1%
Workable time, minutes	20-30
Initial and final set, minutes	< 90
Compressive Strength, N/mm ² at 27°C, as per IS 4031	Result
2 hrs.	22
3 hrs.	30
6 hrs.	35
1 day	45
3 days	50
7 days	58
28 days	65
Fresh wet density, kg/m ³	2100 – 2300
Coefficient of Thermal Expansion, per °C	~11-12x10 ⁻⁶ (Similar to Concrete)
Young's Modulus, N/mm ²	~33000
Pull out Bond Strength, MPa	21 (at 28 days)

Note: Compressive strength is determined by using 5cm cube specimen at laboratory controlled condition, Water demand may vary depending upon site condition.

Domains of Application

- Columns in precast construction
- Anchor bolts
- Quick installation of machineries
- Cavities and Gap filling

The information contained in this technical data sheet is given to the best of our knowledge and the results from extensive testing in order to remain as objective as possible. However, it cannot, in any case be considered as a warranty involving our liability in case of misuse or any different use of our products from the "Application" paragraph of this technical data sheet. Some application tests should be carried out before using the product to ensure that the methods of use and conditions of application of the product are satisfactory. Our technical assistance is at the disposal of the users Consult the latest update of the technical data sheet on our website www.bluskyscpl.com

Method of Application Surface Preparation

Surface laitance and unsound concrete must be chipped away so that a reasonable rough, but strong sound surface is provided. All surfaces must be free from oil, grease and dust, this particularly applies to the underside of base plates, bolts, pipes or other materials which may have surface contact with the grout. After cleaning, saturate the concrete surfaces with clean water. Ensure that no free standing water is present on surfaces of foundations or in bolt holes before applying of **BLUSKY™ XCEM 60HES**.

Mixing

Use mechanical mortar mixers, preferably of the slow speed (250-350 rpm) paddle mixer or revolving drum type mixer. Hand mixing rarely achieves the desired result. Allow approx 5 minutes for mixing. Thorough mixing is essential for achieving maximum results. Add **BLUSKY™ XCEM 60HES** slowly into recommended amount of clean water in a mixer. Use as little water as is required for ease of placement.

For Flowable Mix W/P Ratio : 0.14 to 0.16

For Plastic Mix W/P Ratio: 0.13 to 0.15

For Dry-pack Mix W/P Ratio: 0.12 to 0.14

Job placing conditions, including temperatures may require mixing water adjustments as may be essential for practical purposes. Small trial batches to ascertain the best working consistency for the operation are recommended.

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Application

In order to prevent air voids apply mixed **BLUSKY™XCEM 60HES** from one side or corner only. **BLUSKY™XCEM 60HES** should be placed within half an hour of mixing. Flowable mix may be used with low pressure cement grouting equipment or may be hand rodded into restrained sections. High points must be adequately vented to allow entrapped air to escape. Plastic mortar may be rodded into place. Consistency can range from thick cream to smooth plastic. For large volume of placement areas **BLUSKY™XCEM 60HES** may be pumped with a heavy duty diaphragm pump, screw or any other standard pump. **BLUSKY™XCEM 60HES** shall be used in the thickness range of 20mm to 100mm in single pour. For thickness of a section is more than 100mm, 50-70 % (by weight of **BLUSKY™XCEM 60HES**) 6-10mm down washed coarse graded aggregate shall be used to reduce temperature built up in the hardened grout.

Curing

After completion of concreting work the open edges shall be cured by applying suitable **BLUSKY™CURE-W** or any other effective curing membrane manufactured by **BLUSKY™**. Other curing methods, such as covering with plastic sheet, wet hessian cloth are also accepted.

Advantages

- **BLUSKY™XCEM 60HES** is pre-mixed at our factory under strict quality control that requires no complicated job-site mixing, other than the addition of water.
- Facilitates easy handling and storage as **BLUSKY™XCEM 60HES** Grout is protected in a vapour barrier bag that prevents exposure to the elements.
- Eliminates shrinkage. It has flowable consistency, good workability and excellent void filling action (self-leveling).

- Is ready to use with adjustable consistency and develops high early strength.
- It is non-corrosive to iron and steel.
- It gives high ultimate strength.
- Can be pumped through small nozzles over great distances.
- Contains no harmful chemicals and it is safe to handle.

Shelf Life & Storage

12 months from the date of manufacturing when stored in unopened, original sealed and dry condition at a temperature range from +5°C to 40°C

Packing

25kg waterproof laminated HDPE bag

Precautions

- Mixed grout should be placed continuously pouring it from only one side of the form work.
- Place the grout within 25 minutes of mixing to gain full benefit of expansion process.
- Retendering of grout by adding extra water after stiffening is not recommended.
- The mixed grout containing **BLUSKY™XCEM 60HES** should not be used in unrestrained areas as it may lead to the cracking of the grout

Safety

- Wear hand gloves, safety shoes and safety goggles while using and handling the product.
- In case eyes or mouth are affected wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet. The MSDS is available on www.bluskyscpl.com

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