Industrial flooring & construction products

Grout HS85

Shrinkage Compensated High Strength Cementitious Grout

Description

Grout HS85 is a high strength shrinkage compensated, natural aggregate cementitious precision grout for grouting voids and filling gaps in structural elements from 10mm to 100mm thick. It is designed for grouting applications where good flow with high early and ultimate compressive strengths is required. It can also be used at a trowelable consistency.

Uses

- Equipment baseplates & foundations
- Execution of under pinning
- Pressure grouting of concrete structures
- Grouting of rails and bridge bearing
- Grouting of stanchion baseplates
- Grouting of precast structures
- General voids & gaps filling

Advantages

- Ready to use and only require addition of water on site
- High early and ultimate compressive strengths
- Can be pumped, poured, troweled
- Cost effective, economical to use
- Non-toxic
- Chloride free
- Extended working time

Typical Properties

Specific gravity (kg/l)	:	2.25-2.35
Pot life	:	60 min.
Flow (ASTM C 939) Flow cone method	:	< 30sec. (Using 17% water)
Initial setting	:	5 hr
Final setting	:	6 hr

Compressive Strength (N/mm^2)

1 day	:	> 40
7 days	:	> 60
28 days	:	> 85

*Tested with flowable consistency with 4.25L of water per 25kg bag using cube 50mmx 50mm x 50mm.

Mixing Water (25kg bag)

Flowable	:	4.20- 4.50 litres of water
Trowelable	:	3.20 - 3.50 litres of water

Application

Substrate Preparation

Remove all deteriorated concrete down to sound substrate. Scarify or roughen the surface with chipping hammer and eliminate completely dust, oil, grease, debris and laitance to ensure good bonding. Saturate well-prepared substrate for 3-5 hours before grout placement and remove all free standing water to attained saturate, surface dry condition before placing of grout. To facilitate the elimination of unabsorbed water, use compressed air if necessary.

Forming

For pourable grout, construct forms to retain grout without leakage. Forms should be coated with a form release (Grelease) for easy removal.

Mixing

Pour up to 80% of the required water into a clean container and slowly add **Grout HS85** continuously. Add remaining water to achieve the desired mix. Mix for 1 to 2 minutes with a heavy duty high speed drill, remove from the sides of the concrete mixer any powder that is not well blended; remix for another 2 to 3 minutes until a fluid homogeneous paste is obtained.

According to the quantities to be prepared, a grout mixer or a mechanical mixer can be used paying careful attention to avoid the formation of air bubbles.

Mixing by hand is not recommended.

Addition of fine aggregate

For filling cavities that have dimensions greater than100mm it is recommended to add gravel / aggregate with a maximum diameter of 6 to12 mm not exceeding 30% by weight of **Grout HS85**. Because certain characteristics may vary, such as workability and strength, it is advisable to carry out preliminary tests at the work site.

Placing

Pouring:

Pour **Grout HS85** from one side only in a continual flow encouraging the discharge of air bubbles into the appropriate area. Use a suitable head box to ensure grout flows continuously. The use of **Grout HS85** for connecting precast concrete elements and the filling of rigid joints is recommended for thickness up to 60 mm.

It is not necessary to vibrate the grout mechanically. To facilitate the filling of spaces that are particularly difficult, use a wood list or an iron rod.

Grout HS85 can be pumped

Pumping:

Pumping should begin at the grout inlet nearest one end of the plate. Grout should be pumped into that inlet until it flow up into an adjacent inlet and flows from the entire plate perimeter adjacent to the inlet. The pumpline should be moved to successive inlet until grouting is complete.

Curing

In hot weather it is advisable not to expose the material to sun and to use cold water in preparing the mix.

After casting, the surface of the grout exposed to the air must be protected from rapid water evaporation that can cause the formation of surface cracks due to plastic shrinkage especially in hot and/or windy weather.

The use of wet burlaps, plastic sheets or curing compound is recommended.

Do not disturb formwork or grout for 24 hours

Cleaning

Fresh grout can be removed from tools with water. Hardened concrete must be removed mechanically.

Packaging

Grout HS85 is supplied in 25 kg bags.

Shelf Life

Grout HS85 has a shelf life of 12 months if store in a dry, sheltered place in original, unopened packaging.

Shelf life will be reduced if storage temperature and humidity are high.

Last updated by KH/APR 2018