

Ultra **STEELFIX 2K** Anchoring Grout

DESCRIPTION

STEELFIX 2K is polyester resin based grout materials blended with a hardening compound and fillers and supplied as Part A hardener, Part B resin based grout. After hardening, the grout has high mechanical properties. STEELFIX 2K is used where the difference between the hole diameter and bar diameter is 25mm. Ultra Bond STEELFIX 2K is used for high strength corrosion resistant anchoring of bolts and bars from 12 - 25mm diameter into concrete, rock, masonry or brickwork where high speed of installation and early application of load is required

RECOMMENDED APPLICATIONS

Fixing of reinforcement bars, Steel constructions, wooden constructions, foundation bolts, base plates, barriers and safety fences, tieback anchors, reinforcement dowelling abutments, ground anchors for towers, stainless steel hand railings.

FEATURES & BENEFITS

Rapid strength gains, Vibration resistant, Corrosion resistant, Non expansive
Can be placed underwater.

PERFORMANCE PROPERTIES

COLOR	DARK GREY
PORT LIFE @27C	8 to 12 Min.
Mix Density @ 27 c	1.9 - 2.0 g/cc
Consistency	Flow able



APPLICATION PROCEDURE

Hole preparation and formation

Optimum performance of Ultra STEELFIX 2K grout requires rough sided, dust free holes.

Use of rotary percussive drills with air or water flushing is recommended. Diamond drilled holes should be under reamed unless necessary safety factors are incorporated. Cast holes should preferably be inverse dovetail configuration. If parallel sides holes are cast, they should be rough to provide adequate keying.

Bar Preparation

All bars should preferably be de - greased and all flaky rust removed.

Mixing

A complete pack of STEELFIX 2K (Part A resin and Part B hardener) should be mixed in one operation. Mixing may be carried out mechanically. When a smooth, even consistency is achieved the grout is ready for use and should be placed well within the gel time of the grout 8 to 12 minutes. Packs have been designed to produce practical and economic volumes of grout. Do not attempt to mix partial pack components.

INSTALLATION

Using the calculated volume of grout based on the below table, the grout should be poured steadily into the prepared holes. The anchor bar is then pressed into the hole to the required depth. Slight agitation of the bar will assist in achieving a complete bond.

The bar should then be left undisturbed in the required position until the resin is set. Estimation Table indicates volume of STEELFIX 2K polyester resin grout in cm³/100mm bond.

Gel Time at Different Temperatures

Gel time Temp. (0 c)	Gel Time (Minutes)	Minimum Time Required Before Loading (Hrs)
20	80	7
30	40	3
40	15	1

Compressive Strength : After the minimum time required before loading the grout typically attains a 2 compressive strength.

Chemical Resistance: The cured resin is resistant to fresh and salt water, petrol, oils, grease and mineral acids, and mild alkalis.

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DESIGN CRITERIA

The high strength of the cured resin permits strong anchors to be created. The ultimate bond strength developed depends upon - Strength of host material, Length of resin bond to bar, Hole preparation and formation, Type and dimension of bar.

The following formula may be used to determine the minimum depth of installation for Type 1 rebar bolts, to ensure the shear stress within the concrete is kept within the limits set out in BS 8110.

Hole diameter(mm)		Bolt diameter (mm)	
20	12	16	20
	25		
25	50	40	25

These figures allow for a 25% wastage factor. If the anchor is in very old concrete, masonry or brickwork the wastage factor should be increased. No of bolts/200 mm deep hole which can be fixed using a 2 kg pack of Ultra STEELFIX 2K .

CLEANING

Immediately after application of STEELFIX 2K anchor Grout, clean the tools, equipment and the mixing container using solvents like thinner, otherwise, removal of dried / hardened mortar is difficult.

PACKING: Part A= 500 gram+Part b= 1.5 Kg Net Wt. 2 Kg

STORAGE & SHELF LIFE:

Anchor Grout as supplied shall be stored in a cool & dry place away from sunlight, moisture & high humidity & have a shelf life of 6 Months in the original packing.

PRECAUTIONS:0

Fire resistance and creep

At operating temperatures above 40 C, the creep of STEELFIX 2K polyester resin grout under load may become significant. Resin anchors should not be used where structural load bearing performance has to be maintained in anchors subjected to fire conditions.

HEALTH & SAFETY

Confined areas must be well ventilated and no naked flames allowed.

Contact with the skin should be avoided as certain sensitive skins may be affected by contact with the polyester resin.

In such cases if contact with the resin occurs, the skin should be washed immediately with soap and water & not solvent. Gloves & barrier creams should be used when handling these products.

Eye contamination must be immediately washed with plenty of water and medical treatment sought