

ULTRA SG – TDS

Product Name:

Ultra SG

Product description:

Ultra SG is a free flow, high strength, non-shrink, cementitious precision grout. **Ultra SG** is supplied as a ready to use dry powder. The addition of a controlled amount of clean water produces a free flowing and non-shrink grout for gap thicknesses up to 100mm. **Ultra SG** is a blend of Portland cement, graded fillers and chemical additives which impart controlled expansion in the plastic state whilst minimising water demand. The low water demand ensures high early strength. The graded fillers are designed to assist uniform mixing and produce a consistent grout.

Advantages:

- Gaseous expansion system compensates for shrinkage and settlement in the plastic state
- No metallic iron content to cause staining.
- Pre-packed material overcomes onsite batching variations.
- Develops high early strength without the use of chlorides.
- High ultimate strength ensures the durability of the hardened grout.
- Free flow ensures high level of contact with load bearing area.

Area of usage:

Ultra SG is used for precision grouting where it is essential to withstand static and dynamic loads. Typical applications would be the grouting of base plates of turbines, compressors, boiler feed pumps etc., and it can also be used for anchoring a wide range of fixings. These include masts, anchor bolts and fence posts.

Mixing:

For best results a mechanically powered grout mixer should be used. When quantities up to 50kg are used, a heavy duty slow speed drill (400-500 rpm) fitted with a paddle is suitable... Larger quantities will require a heavy duty mixer. To enable the grouting operation to be carried out continuously, it is essential that sufficient mixing capacity and labour are available. The use of a grout holding tank with provision to gently agitate the grout may be required. The quantity of clean water required to be added to a 25kg **Ultra SG** bag to achieve the desired consistency is given below:

Pourable : 4.125 ltr.

Flowable : 4.5 ltr.

The selected water content should be accurately measured into the mixer. The total content of the **Ultra SG** bag should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Placing:

- At 30°C place the grout within 20 minutes of mixing to gain full benefit of the expansion process.
- **Ultra SG** can be placed in thicknesses up to 100mm in a single pour when used as an under plate grout.
- For thicker sections it is necessary to fill out **Ultra SG** with well graded silt free aggregate to minimise heat build up. Typically a 10mm aggregate is suitable. 50 - 100% aggregate by weight of **Ultra SG** can be added.

Application instructions:

The substrate surface must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes and fixing pockets must be blown clean of any dirt or debris.

Pre-soaking:

Several hours prior to placing, the concrete substrates should be saturated with fresh water. Immediately before grouting takes place any free water should be removed with particular care being taken to blow out all bolt holes and pockets.

Curing:

On completion of the grouting operation, exposed areas should be thoroughly cured with continuous application of water and/or wet hessian.

Limitations:

Low temperature working: When the air or contact surface temperatures are 10°C or below on a falling thermometer, warm water (30 - 40°C) is recommended to accelerate strength development. For ambient temperature below 10°C the formwork should be kept in place for at least 36 hours. Normal precautions for winter working with cementitious materials should then be adopted.

High temperature working: At ambient temperatures above 40°C, cool water (below 20°C) should be used for mixing the grout prior to placement.



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Packaging:

Ultra SG is supplied in 25 kg moisture resistant bags.

Yield:

Allowance should be made for wastage when estimating quantities required. The approximate yield per 25 kg bag for different consistency is:

Consistency	Pourable	Flowable
Yield (litres)	12.5	13.3

Storage and Shelf life:

Ultra SG has a shelf life of 6 months if kept in a dry store in sealed bags. If stored in high temperature and high humidity locations, the shelf life may be reduced.

Precautions:

Ultra SG is alkaline and should not come into contact with skin and eyes. Inhalation of dust during mixing should be avoided. Gloves, goggles and dust mask should be worn. If contact with skin occurs, it shall be washed with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

Technical Data:

Appearance	Grey
Pot life	
Shelf life	
Open time	
Compressive strength	
Flexural strength	
Tensile strength	3.5N/mm ² @ 28 days
Coverage	

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