

SOPRA FLO EX

Description

SOPRA FLO EX is an expansion system which compensates for plastic shrinkage and settlement in cementitious grouts and concrete. **SOPRA FLO EX** comes in a powder form and produces controlled expansion and maintains high water retention. It contains a water reducing agent which increases the workability of the mixture with a reduction in the water content. Full expansion is achieved before initial setting occurs resulting in a homogeneous mixture.

Recommended Uses

SOPRA FLO EX can be used in the following applications:

- Ready-mixed or precast concrete structures requiring shrinkage and long-term durability.
- Shotcrete (Wet mixture).
- Mortars and grouts.

Features and benefits

- An expanding agent that increases the volume of the grout or concrete that eliminates shrinkage and settlement in the mixture.
- A cement plasticizing and water reducing agent to improve the free-flowing properties of the grout at low W/C ratios.
- A catalyst to control the rate of expansion and to ensure full expansion of the grout, mortar or concrete.

Standards Compliance

SOPRA FLO EX complies with BS 8110 Part 1, 1997 and with ASTM C827.

Packaging

SOPRA FLO EX is available in 225g & 5kg moisture resistance bag.

Storage

SOPRA FLO EX has a shelf life of 12 months. Store away from direct sunlight, protected from rainfall.

Properties

Appearance	Brownish powder
Chloride content	Nil to BS 5075
Compressive strength	Improvement in strength and durability when cured.
Freezing point	N/A
Compatibility	With all types of Portland cement
Time for Expansion	15 mins – 2 Hrs

Expanding Properties

The expansion obtained by the use of **SOPRA FLO EX** reaches a maximum within 1-2 hours of mixing under average temperature conditions. After this period no settlement occurs, and the grout retains its maximum expansion. **SOPRA FLO EX** produces a maximum expansion of 3.25% in a neat cement grout, and 2% expansion in a 1:1 sand/cement grout.

Dosage

SOPRA FLO EX is used at the rate of 225-250g per 50kg cement.

Mix Design

	OPC	Sand	Water (Liters)	FLO EX	App. Yeild
MIX 1	50 kg	-	20-22	225 g	35 Ltrs
MIX 2	50 kg	50 kg	22-24	225 g	56 Ltrs

- Note: For grout, mortar or concrete mixes with an aggregate/cement ratio more than 1, use 900g of **SOPRA FLO EX** per 100 kg of cement.

Application Instructions

a) Mixing

For quantities up to 50 kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear mixer. It is essential that machine mixing capacity and labor availability is suitable to permit the grouting operation to be carried out continuously. This may require the use of a holding tank with delivery for a distressful job. The selected water content should be accurately measured into the mixer. Slowly add the cement (and sand if required) and **SOPRA FLO EX**. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

b) Application

Grouted areas should be prepared to ensure substrates are clean, sound, and then pre-wetted. The unrestrained surface area of the grout must be kept to a minimum. Place the grout within 20-30 minutes of mixing to gain the full benefit of the expansion process. Adopt usual placing or pumping procedures ensuring a continuous operation.

c) Application

On completion of the grouting operation, any exposed areas which are not to be cut back should be thoroughly cured by means of water application or curing compound.

d) CLEANING OF TOOLS

Tools and application equipment should be cleaned with water immediately after use. Hardened material can only be mechanically removed or using **SOPRA H REMOVER**.

Precautions

SOPRA FLO EX is non-hazardous material. It should not be swallowed or come in direct contact with skin or eyes. Suitable protective glasses and gloves should be worn during application. In the case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice if irritation occurs. When contact with skin occurs, wash off immediately with clean water and soap. If swallowed, seek medical emergency immediately, do not induce vomiting.

Technical Support

Sopra provides on-site assistance and consultation services on projects if required. Technical Datasheets on other **Sopra** products and guidance on their use are available on request or on our website.

Warranty

The information relating to the application and end-use of **Sopra** products, are provided in good faith based on **Sopra's** current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with **Sopra** recommendations. In practice, the differences in substrates and actual site conditions are such that no warranty in respect of sale for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must do their test to ensure that the product is suitability for the intended application and purpose. The company reserves the right to change the properties of its products without prior notice.