



# STERLING<sup>®</sup> FLOWMAX<sup>®</sup> NS100

**TECHNOTRADE** Expanding Plasticising Admixture Compound  
The Specialist Construction Chemical Company For Cementitious Grout And Concrete.

## Description:

Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 is supplied as a powder expansion admixture system which compensates for plastic shrinkage and settlement in cementitious grouts and concrete.

Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 allows the use of a reduced water: cement ratio with consequent increased strength and durability. The expansive medium counteracts the natural settlement and plastic shrinkage of the grout and aids stability and cohesion. Sufficient restrained expansion is developed to ensure a high degree of interfacial contact.

## Application includes:

Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 is recommended for use in the following areas of application:

- In Ready-mixed or precast concrete structures requiring shrinkage and long-term durability.
- Wet mix shotcrete.
- Mortars and grouts.

## Features & Benefits:

- Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 compensates for plastic shrinkage and settlement in properly designed cementitious grout.
- Reduced water: cement ratio in the grout mix, ensures low permeability and long term durability in service.
- Gives high grout fluidity with low water: cement ratio, thus making placement or injection of the grout easy.
- No metallic iron content to corrode and cause staining or deterioration due to rust expansion in the grout.
- Composition allows high early strength development in grout, without the use of chlorides.

## Packaging:

Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 is supplied in Air tight pouch of 225grms, (1x225grmsx50) and 30 Kg HDPE bag.

## Storage & Shelf Life:

Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 has a shelf life of 12 months if kept in dry store in its original packaging. High temperature and humidity storage may reduce this period.

## Limitations:

Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 is not compatible with high alumina cement.

## Instructions & Usage:

To prepare for placement of Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100, ensure sufficient material available on site to ensure continuous grouting. All post tensioned Cables should be carefully cleaned with water prior to grouting process. Any free water must be drained out after cleaning. Cable anchorage should be sealed prior to duct grouting.

## Application:

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

## Mixing:

For quantity up-to 60 Kg. a slow speed drill fitted with a high shear paddle is suitable. Large quantities will require a high shear vane mixer. It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.

The selected water contents should be accurately measured and added into the mixes. Slowly add the cement and sand if required and Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100. Mix continuously for 5 minutes, making sure that a smooth even consistency is obtained.

## Curing:

On completion of the grouting operation, any exposed area which are not to be back should be thoroughly cured by means of water application, TechnoFinish<sup>®</sup> ConKure 101/102 curing compound or wet hessian.

## Cleaning:

Grout mixed with Sterling<sup>®</sup> FlowMax<sup>®</sup>NS100 should be removed from tools and equipment with clean water immediately after use.

## Dosage:

The rate of addition varies from 0.5% - 2% by weight of dry cement. The optimum dosage depends on the nature of the work.

OPC	Concreting sand	Water	FlowMax <sup>®</sup> NS 100	Yield
50 kg	Nil	20-22	225 gram	36 ltr
50 kg	50kg	20-22	225 gram	57 ltr

Note: For grout, mortar or concrete mixes with an aggregate/cement ratio more than 1, use 4x225 grms. Units of Sterling<sup>®</sup>FlowMax<sup>®</sup>NS100 per 100 kg of cement.

## Effects of overdosing

Drastic over-dosing of FlowMax<sup>®</sup>NS100 increases expansion and may cause frothing.

## Health & Safety Instructions:

Sterling® FlowMax®NS100 is formulated from chemicals which present no fire or health hazards. Does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Store all materials and equipment safely and out of reach of children and animals. Observe container labels, SDS, applicable laws and regulations and all instructions before using the product and equipment. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Provide adequate ventilation in volume and pattern in working area.

**\*Further protection:** emergency showers and eyewash stations. Get immediate medical attention as needed.

**Disclaimer:** The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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## Typical Properties at 25°C

<b>Chloride content</b>	Nil to BS 5075 : 1982
<b>Expansion characteristics</b>	The expansion obtained by the use of Sterling® FlowMax®NS100 reaches a maximum within 1-2½ hours of mixing under average temperature conditions. After this period no settlement occurs, and the grout retains its maximum expansion. FlowMax®NS100 produces a maximum expansion of 3.25%-4% in a neat cement grout, and 2% expansion in a 1:1 sand/cement grout.
<b>Setting time</b>	FlowMax® NS 100 does not significantly affect the setting times of cement based grout.
<b>Compressive strength</b>	The plasticizing action of FlowMax® NS 100 allows reduction of water: cement ratio of cementitious grout whilst maintaining flow properties. This gives improvement in strength and long term durability when cured under restraint.
<b>Compatibility</b>	FlowMax® NS 100 is compatible with all types of Portland cement. FlowMax® NS 100 may be used in mixes containing certain other admixtures, consult Sterling Technotrade Technical representative for further information.

**Additional Information:** Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

\*Separate datasheet are available on these products.

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