



奧迪美®

# NS688

## EXPANDING GROUT ADMIXTURE

EXPANSIVE, PLASTICISING AND BLEEDING CONTROL COMPOUND FOR OPC

### PRODUCT DESCRIPTION

**OPTIMIX NS688 EXPANDING GROUT ADMIXTURE** is a powder additive for cement grout to provide positive expansion. **NS688** is a high quality workability enhancement admixture for cement mixes to produce a free flowing grout.



### TYPICAL USAGE

- Grouting applications where a positive expansion is required
- Post tensioning duct grouting
- Void infilling, base plate grouting, sonic tube grouting
- Socket "H" pile and mini piling applications
- Soil nails grouting for slope stabilization

### FEATURES AND BENEFITS

- Increase flow characteristics at reduced water cement ratios
- Improve compressive strength
- Positive expansion compensates for drying shrinkage
- Reduce bleeding

## TECHNICAL DATA

Product Characteristics <sup>1)</sup>	<b>OPTIMIX NS688</b>
Supplied State	Powder
Colour	Grey
Compatibility	All types of Portland cement (except with high alumina content)
Time of Efflux (Flow Cone Test)	~ 26.8 seconds
Compressive Strength at 7 days*	> 45 MPa
Compressive Strength at 28 days*	> 55 MPa
Expansion	> 1%
Bleeding	< 2% (3 hours)
Chloride Content	< 0.01 %
Re-absorption of Bleeding Water	< 24 hours

Packaging & Yield <sup>2)</sup>	<b>OPTIMIX NS688</b>
Wet Density (kg/m <sup>3</sup> )	~ 1,900
Coverage (kg/mm/m <sup>2</sup> )	~ 1.9
Yield (per pail)	~ 6,100 kg (~ 3.2m <sup>3</sup> )
Packing Size (per pail)	20 kg
Shelf Life	12 months

### Notes

- 1) The results given here are typical laboratory results based on recommended dosage and available cement. Determined performance will vary due to variations in cement used, equipment, skills, substrates, ambient conditions etc.
- 2) These are approximate figures and take no account of wastage.

Recommended Dosage		
OPC	Water / Cement Ratio	<b>OPTIMIX NS688</b>
45 kg	0.38 - 0.42 (17.7 - 18.9 L of water)	205 g

Environmental Data	
Volatile Organic Compounds (VOC)	≤ 10 g/L
Potential BEAM points	Product is manufactured within 800km of Hong Kong project sites



Testing Methods	
Compressive Strength	CS1
Flow - Cone	ASTM C 939
Chloride Content	BS EN 480-10
VOC Content	USEPA Method 24

Note: The tests were performed according to Hong Kong and international standards or in-house modifications of the corresponding testing procedure.



## **INSTALLATION GUIDE**

*(Refer to Method Statement for more details)*

### **SURFACE PREPARATION**

Substrate must be clean, free from unsound material, oil grease and other contaminants. Roughen and pre-soak the surface with potable water before grouting. Remove free water in particular from bolt holes and recesses. Metal surfaces must be free from rust, oil and grease except for levelling shims which should be treated with a thin layer of grease for ease of removal afterward. The formwork should be sealed properly to prevent leakage.

### **MIXING**

The correct quantity of water is added to a clean container, followed by cement and **NS688**. Mechanical mixing with slow speed drill fitted with a suitable paddle is recommended. Mix the mixture for about 5 minutes or until a lump-free homogeneous mix is achieved.

### **APPLICATION**

The grout mixture should be poured to the prepared location or void immediately after mixing. The grouting should be applied in a continual operation until the void or gap is completely filled. The amount of material required should be prepared and stored close to the mixing area to ensure a continuous flow. Utilizing a minimum travel length may further enhance performance.

### **HEALTH AND SAFETY**

**OPTIMIX NS688** is alkaline in nature and can cause irritations to persons with sensitive skin. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective gloves and masks while handling the product. If contact with eyes, rinse immediately with plenty of clean water and seek medical advice. This product is non-toxic and is not flammable.

### **STORAGE**

Store the products in a cool and dry place with the original unopened bags on pallets with plastic wrapping. Protect from direct sunlight, rainfall and exposure to high humidity conditions. Avoid excessive stacking of pallets. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging and reduce shelf life.



**Important Note:** The information contained herein is, the best of our knowledge, true and reliable and is supported by the present state of our knowledge. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives as the conditions of use and any labour involved are beyond our control.



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