

# ITOS<sup>TM</sup> SH 200

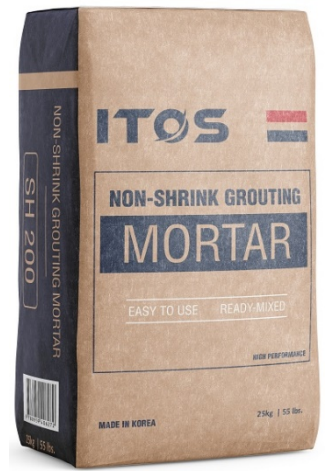
## A Non-Shrink, High Strength, Non-Metallic Cementitious Grouting Mortar

Standard Specification

### CHARACTERISTIC RATINGS

	Min	Max
Non-Shrink	5	
Self Leveling	3	
Water resistant	3	
Expansion	4	
Early strength	1	

1 = Minimum  
2 = Low  
3 = Moderate  
4 = High  
5 = Extreme



MORTAR PRODUCT LINE

### DESCRIPTION

SH 200 is a ready-mixed, non-shrink, non-metallic, flowable, high-strength structural grout. SH 200 contains a balanced blend of washed and graded silica sands, Portland cement, flow improving compounds, and a shrinkage compensating system which produces a volume stable structural grout. SH 200 produces high early and ultimate strengths without intermediate or latent shrinkage. SH 200 remains stable without failure from compressive loading, impact, lateral thrusts, high heat or continuous vibration. It is scientifically proportioned and is ready for use at varied consistencies from plastic to fluid.

### USE INCLUDE

Use SH 200 for general and structural concrete repair, doweling and anchoring, industrial grouting, formed work, vertical and horizontal trowel applications. SH 200 is ideal for airport, highway, industrial and marine applications.

Grouting under baseplates, columns and equipment not subjected to heavy impact or vibratory load.  
Grout jacking of concrete slabs.  
Grouting of anchor bolts.  
Underpinning of structures.  
Grouting holes or cracks in concrete.  
Void backfilling in tunnels.  
Grouting of post-tensioned structural sections.

### PREPARATION

1. Concrete surface must be free from oil, grease and dust. Loose contaminants and unsound concrete must be chipped away.
2. Bedplate, bolts, pipes or other materials, which may have surface contact with the grout free from rust, oil, grease and dust.
3. After cleaning, saturate the concrete surface with clean water at least 3-4 hours.

Ensure that no freestanding water is present on surface. Remove any free water by use of compressed air on dry towels.

### MIXING

1. Mix the powder with pre-gauged clean water to suit the desired consistency.
2. For grouting, mix approx. 4-4.5 liters of water with 1 bag of SH 200 (16-18% by weight of powder or water powder ratio is 1 :4 by volume)
3. For plastering, mix approx. 3-3.5 liters of water with 1 bag of SH 200 (12-14% by weight of Powder or water : powder ratio is 1 : 5 by volume.)
4. Mix with an electric drill and paddle (Max speed 500 rpm) or in a pan or revolving barrel type mixer. allow approximately 3-5 minutes after mixing to achieve maximum results.
5. When the thickness is over than 100 mm. add 10% by weight of uniformly graded 2/8" (6 mm.) maximum size pea gravel per 1 bag. of SH 200

### APPLICATION

SH 200 should be placed from one direction only in order to reduce the amount of voids under the plate. SH 200 should be placed without stopping until the forms are overflowing, and entrapped air can no longer be seen in the grout as it flows from under the plate and over the forms.

SH 200, when mixed to a fluid or flowable consistency, can be placed by either pumping or gravity flowing. If the pumping method is to be used, the discharge end of the pump hose should be placed at the most distant point to be grouted. The pump hose should be withdrawn as the grouting process continues. If the gravity flowing method is used, a slanted form at a 45° angle to the horizontal, or a funnel, should be mounted at the point at which the grout is introduced into the form. The height of the slanted form (or funnel) should be approximately 6-8" (150-200 mm) higher than the highest point to be grouted.

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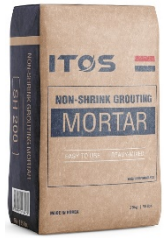
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A MATERIALS CORP

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### FINISHING

The grout should be poured across the slant form, or through the funnel, until the grout has completely filled the formed area and is overflowing the forms. If SH 100 is plastic, use rods, chains or tamping to compact grout and to remove voids if necessary.

### CURING

Exposed SH 200 must be protected and cured immediately after placement. Cover with clear plastic, damp clean rags or burlap for a period of 72 hours. Do not let the rags or burlap dry out during the curing period.

### TOOL CLEANING

Clean all equipment and tools with water immediately after use.  
The hardened material can only be removed by physical scraping.

### COVERAGE

Grouting works: Approximate 2 kg. of powder per 1 liter of mortar  
Repairing works: 16 kg./m<sup>2</sup> at 10 mm. thickness.

### PACKAGING

25 kg Kraft Paper bag (Pallet 64 bags, 1600 kg, protected by plastic bag wrapping)  
25.6MT/20'container, 1024 bags/container

### SHELF LIFE

The shelf life is 6(min) ~ 12(max) months when stored unopened in dry, normal conditions.  
Excessive temperature differential and/or high humidity can shorten the shelf life expectancy.  
Store in a cool, dry area away from direct sunlight.

**WARNING!!!** Do not use SH 200 when the temperature is below 5°C, in the presence of strong wind, rain or in direct sunlight. In summer months, the temperature when applying must not be above + 30°C. Do not apply to surfaces that are frozen, dusty, inconsistent or unstable.

### PRODUCT DATA

Appearance	Powder type
Color type	Grey type
Dry bulk density	~ 1400 kg/m <sup>3</sup>
Maximum aggregate size	< 2mm

### TECHNICAL DATA

Set Time	Initial set	40 minutes
	Final set	3 hours
Compressive Strength	1 day	3000 psi (20.7 MPa)
	7 days	6000 psi (45 MPa)
	28 days	9000 psi (62 MPa)
Height change	1 day	0-0.2 (mm)
	7 days	0-0.2 (mm)
	28 days	0-0.2 (mm)

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### TECHNICAL DATA

Freeze-Thaw Resistance

Excellent, superior to concrete.

Flexural Strength

Resists vibration.

### LIMITED WARRANTY

ITOS Co., Ltd. warrants its materials to be of good quality and, at its option, will replace or refund the purchase price of any material proven to be defective within one (1) year from date of purchase. The above remedies shall be the limit of ITOS's responsibility. Except for the foregoing, all warranties expressed or implied, including merchantability and fitness for a particular purpose, are excluded. ITOS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials.

### SPECIAL OFFER

**!!! We can provide it by changing it to the specifications you want.**

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