

## PRODUCT DATA SHEET

# SikaGrout<sup>®</sup>-190

(formerly MFlow 190)

Shrinkage compensated, post-tension fluid grout for cables and anchors

### DESCRIPTION

SikaGrout<sup>®</sup>-190 is a shrinkage compensated, pre-bagged powder, which requires only the addition of water to produce a fluid and high ultimate strength grout with extended workability. Suitable for use in hot and tropical climatic conditions.

### USES

SikaGrout<sup>®</sup>-190 may only be used by experienced professionals.

- Use for horizontal and vertical grouting of ducts within bonded, post-tensioned structures.
- Use to grout, fill or repair voids with ducts of posttensioning strands for corrosion protection.
- Use for grouting tight clearances.

### PRODUCT INFORMATION

Composition	Portland cement, special additives
Packaging	25 kg bag
Shelf life	6 months from date of production
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions between +5 °C and +35 °C. Protect from direct sunlight, heat and moisture.
Appearance and colour	Grey powder

### FEATURES

- Suitable for filling of voids within ducts of post-tensioned structures
- Easy to use
- High early and ultimate strength
- Good workability
- High bond to steel, increases the pull out failure load

### CERTIFICATES AND TEST REPORTS

SikaGrout<sup>®</sup>-190 follows the requirements of EN 445

## TECHNICAL INFORMATION

Compressive strength	~60 N/mm <sup>2</sup> (28 d) (w/p = 0.345)	(EN 445)
Flexural-strength	≥ 7 N/mm <sup>2</sup> (28 d)	(BS EN 445)
Expansion	0 to 5 % (1 d) (w/p = 0.345)	(EN 445)
Bleeding	< 2 % (3 h) (w/p = 0.345)	(EN 445)

## APPLICATION INFORMATION

Fresh mortar density	~2.00 kg/l (25°C)	(ASTM C-138)
Yield	~16.5 L / 25 kg bag	
Flowability	Immediately after mixing ≤ 20 s 30 minutes after mixing ≤ 20 s w/p = 0.345 (+23 °C)	(EN 445) (EN 445)
Mixing ratio	8.5 - 8.75 L of water per 25 kg bag Water to powder ratio min. 0.34, max. 0.35 range (w/p = 0.34 - 0.35)	

## BASIS OF PRODUCT DATA

- All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
- Internal Reference - Version: MBS\_CC-UAE/ FI\_190\_02\_03/v3/12\_17/v4/06\_18

## FURTHER DOCUMENTATION

Method Statement

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

#### Cable Duct Grouting:

Ensure that ducts, openings, inlets and outlets are clean, free of dirt and debris, fuel, oils and any other contaminants at all times.

#### Other grouting applications:

Remove all dirt, oil, grease, and other bond-inhibiting materials by mechanical means. Anchor bolts to be grouted must be degreased with a suitable solvent cleaning agent. Concrete must be sound and roughened to promote mechanical adhesion. Prior to pouring, the concrete surfaces should be in a saturated surface dry condition (SSD).

## MIXING

For small applications mixing by paddle mixer is possible, however trials to assess the efficiency of such mixing equipment should be conducted. Mixing procedure may vary depending on the mixing equipment. Add 80 % of the water to the empty mixing vessel and add the SikaGrout®-190 powder while mixing, continue mixing for 1 minute. Add the remaining water whilst mixing and continue for further 3 minutes. For larger quantities use a high shear colloidal type mixer (1400 rpm), slow speed agitator and pump. Mix the required amount of water and powder in a controlled manner to prevent lump formation. Continue mixing for approximately 3 minutes after adding the powder, longer mixing may increase the mix temperature and lead to premature setting. Upon completion of mixing, the grout should be transferred to the agitator vessel, where it should not remain for more than 30 minutes.

#### Mixing Watchpoints:

- At higher temperature use chilled water and store the bags in a cool place, to keep the mixed grout temperature below 25°C
- Mixed grout should be transfer to the agitator through a 2 mm sieve
- Do not use excess water
- Do not use hardened or lumpy grout caused by torn or water damaged bags
- Do not mix by hand
- Discard any grout that has been left in excess of 30 minutes

Please contact your local Sika Technical Representative for further information.

## APPLICATION

In most applications SikaGrout®-190 should be pumped with a diaphragm, piston or progressive cavity type pump. The chosen pump should provide a continuous flow of grout. The pump should be fitted with a pressure limiting device capable of limiting pressure below 2 MPa, hoses and connections should be checked at such pressures prior to grouting start. In certain applications, it may be necessary to cool and pre-soak the duct / hole, care should be taken to blow out such fluid prior to grouting start.

Typically, inlets for grouting shall be at the lowest point and outlets at the highest. The consistency of the grout at the outlet should be checked prior to stopping of grouting operations.

Refer to Sika Technical Representative for specific installation advice.

## CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness 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 test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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ISO 9001, 14001, 45001 – SGS  
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ISO 9001, 14001 – SGS  
- Sika Saudi Arabia Limited  
ISO 9001, 14001 – TÜV  
- Sika MB Construction Chemicals LLC  
- Sika Construction Chemicals for Manufacturing LLC  
- Master Builders Solutions LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



### Product Data Sheet

SikaGrout®-190

September 2024, Version 02.01

02020100000002022