

# PRODUCT DATA SHEET

## Parex CS Grout

Non-shrink, high strength cementitious grout

### DESCRIPTION

Parex CS Grout is a Portland cement based product giving high strength, good flow and non-shrink properties. Placed grout gives structural support and good vibration resistance.

### USES

- Crane and transport rail tracks.
- Stanchion bases.
- Machine and turbine bed plates.
- Dowel bars between precast concrete units.
- Bedding precast concrete units.
- Ground anchors, starter bars and bolts.
- Bridge bearing supports.

### CHARACTERISTICS / ADVANTAGES

- High strength.
- Non shrink.
- Chloride free.
- Low water absorption.
- Resistance to sea water and mild alkali attack.

### APPROVALS / CERTIFICATES

CS Grout has been tested in accordance with the appropriate parts of the following standards: EN 12390, BS 476, ASTM 827-01a, ASTM C939-02, ASTM C953 and ASTM C1107.

CS Grout complies with the requirements of Corps of Engineers Specification for Non-Shrink Grout CRD-C621, Department of Transport Specification for Highway Works Clause 2601 and BS 6920.

### PRODUCT INFORMATION

Packaging	25kg bags & 1 tonne bulk bags
Shelf life	6 months
Storage conditions	Store properly in dry conditions in undamaged and unopened original sealed packaging
Appearance and colour	Grey powder
Density	~2100 kg/m <sup>3</sup>

### TECHNICAL INFORMATION

Compressive strength	Consistency	1 Day	3 Days	7 Days	28 Days
	Mortar	~50 N/mm <sup>2</sup>	~66 N/mm <sup>2</sup>	~72 N/mm <sup>2</sup>	~75 N/mm <sup>2</sup>
	Plastic	~41 N/mm <sup>2</sup>	~60 N/mm <sup>2</sup>	~69 N/mm <sup>2</sup>	~72 N/mm <sup>2</sup>
	Liquid	~25 N/mm <sup>2</sup>	~47 N/mm <sup>2</sup>	~51 N/mm <sup>2</sup>	~56 N/mm <sup>2</sup>
Modulus of elasticity in compression	~30 KN/mm <sup>2</sup>				

<b>Tensile strength in flexure</b>	~10 N/mm <sup>2</sup> (after 28 days)
<b>Reaction to fire</b>	Euroclass A1
<b>Yield</b>	25 kg yields ~13.25 litres of mixed product
<b>Layer thickness</b>	10mm min. / 100mm max.
<b>Ambient air temperature</b>	+5°C min. / +45°C max.
<b>Setting time</b>	~290 mins
<b>Initial set time</b>	~260 mins

## BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

#### Concrete, Mortar and Stone:

Surfaces must be sound, clean, free from ice, oils, grease, standing water and any loose or friable particles, and any other surface contaminants. The concrete 'pull off' (tensile) strength should be >1.0 N/mm<sup>2</sup>.

#### Steel and Iron:

Clean, free from oil or grease, rust and scale, etc.

#### Substrate Preparation:

The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blastcleaning, scabblers, etc. The concrete substrate should be pre-soaked with clean water continuously for 2 - 6 hours to ensure a saturated surface dry condition throughout the operation. Immediately before pouring grout, remove all excess or standing water from within any formwork, cavities or pockets.

#### Shuttering/Formwork:

All formwork should be of adequate strength, treated with release agent and sealed to prevent leakage. Sealing can be achieved by using Sikaflex® -11FC+ sealant beneath or around formwork and between joints. Ensure formwork includes outlets for extraction of the pre-soaking water. A header box/hopper should be constructed on one side of the formwork so that a grout head of 150 - 200 mm can be maintained during the grouting operation.

## MIXING

Pour 4.5 litres of clean water into a suitable mixing vessel for each complete bag of Parex CS Grout to be used. Slowly add the powder to the water whilst continually mixing. Mechanical mixing should be carried out using either a high torque slow speed drill with a grout stirrer, or a grout mixer set on slow speed (high speed or colloidal mixing will cause thixotropy leading to loss of flow). Mix until all powder has been fully dispersed and a homogeneous product is achieved. Alternate consistencies are achievable using the following volumes of water per 25 kg bag:

Mortar	3.6 litres
Plastic	4.3 litres
Liquid	4.8 litres

## APPLICATION

Grout should be placed within 20 minutes of mixing. Continuous placing is important, pouring from one side of the formwork until the grout appears at the opposite side of the grouting area. Do not disturb once grouting has been completed.

## CURING TREATMENT

Placed grout, which is exposed, should be cured in accordance with good concrete practice including water spray or by using Sikafloor® ProSeal. In cold weather, apply heat blankets to maintain a constant temperature.

## CLEANING OF EQUIPMENT

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

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## 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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