

## NSG 2601- TS Non-Shrink Grout – Thick Section

### Description

KPRO NSG 2601-TS is a pre-blended, highly flowable, fibre-reinforced non-shrink grout that fully meets the standards of EN 1504 Parts 3, as well as the Specification for Highway Works Volume 1: Clause 2601, as specified by the NRA and Department of Transport Publications. When mixed with a precise amount of clean water, this grout achieves excellent flowability with controlled shrinkage. NSG 2601-TS is specifically formulated for high flow with low water demand, delivering high early strength, zero shrinkage, and long-term durability.

### Applications

NSG 2601-TS is suitable for use at horizontal gap thicknesses of 75-500mm, in the following applications,

- Large baseplate grouting for stanchions, plant and machinery.
- Duct Filling for pre-stressed and post tensioned elements.
- Jointing of precast concrete units.
- Filling box sections.

### Product Use

**Mixing:** To achieve a high fluidity grout mix the contents of a 25kg bag with 3.50-3.8 litres of clean potable water. Using excessive water (above 0.2 water/solid ratio) will affect the overall performance of the product and causing segregation in thick sections. Mixing should be carried out in a suitable container by forced action using a paddle or high shear vane mixer, or grouting pump. The powder should be added gradually to the measured water in the mixing vessel and mixed for 5 minutes until a smooth, cohesive consistency is achieved. Once mixed no further water should be added.

**Placing:** NSG 2601-TS is used for applications from 75 – 500 mm in thickness. All surfaces must be clean and free from laitance, dust, debris and all oils etc. The grout should be placed within 30 minutes of mixing to guarantee the maximum physical properties performance. On completion of process all exposed areas should be cured with a suitable curing membrane. For thinner section use NSG 2601 – HF.

**Baseplate:** Ensure that a sufficient supply of material will be mixed in order to avoid interruption when filling. Always pour from one side and use air vents where necessary to avoid air entrapment. Pour from a height to ensure maximum compaction and use a rod to aid filling. Do not vibrate the grout. Temporary levelling shims should be greased if they are to be removed after grout hardens.

**Grout Sleeve Splice Connections:** NSG 2601-TS can be pumped or poured into the grout sleeve in a continuous fashion to avoid cold bridging. Care should be taken to ensure complete filling of the sleeve.

**Formwork:** Formwork should be prepared effectively to contain the fluid grout. Place grout from a sufficient height and flow to ensure no air entrapment. As the grout is free flowing it is important to ensure the formwork is sufficiently prepared to avoid leaks. A sacrificial concrete mix can be used to fix the baseplate shutter or as a bern. Keep unrestrained areas around the baseplate to less than 150mm.

**Curing:** Should be as per standard practices for cement based products. Grout should be protected from strong sunlight and cold weather.



### Benefits

- Non-Shrink formula
- High early and ultimate strength
- Fiber Reinforced
- Suitable for Thick Section
- High flowability with no segregation
- Can be pumped or poured
- Long term durability
- Convenient and User-Friendly
- Eliminates wastage
- Chloride free

### Approximate Yield

No. 25kg bags	Approximate litres
1	13.0

### Application Temperatures



+5°C to +30°C

### Health & Safety

Please refer to the relevant Material Safety data sheet online at [www.kilsaran.ie](http://www.kilsaran.ie).

### Get in touch



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#### Technical Data

KPRO NSG 2601-TS fully complies with the requirements of EN 1504 parts 3, and also the Specification of Highway Works Volume 1: Clause 2601 in NRA and Department of Transport Publications.

Properties – DoT SHW Clause 2601.4 Requirements/ Tii SRW Series 2600.4						
Characteristic	Test Method	Declared Value				Pass/Fail
Flow Cone/Efflux Time	ASTM C939-02	5°C	33 sec	20°C	32 sec	Pass
Flow Between Glass Plates	HCD drawing no.K2	5°C	Satisfied	20°C	Satisfied	Pass
Early Expansion	ASTM C827-01a	1.51%				Pass
Elastic Stability	-	0.31%				Pass

Workability Properties – EN 13395-2 Flow Trough (Fluid Consistency)							
5 min		15 min		30 min		60 min	
30 sec	120 sec	30 sec	120 sec	30 sec	120 sec	30 sec	120 sec
≥ 750 mm	≥ 750 mm	≥ 750 mm	≥ 750 mm	≥ 620 mm	≥ 680 mm	≥ 500 mm	≥ 580 mm

Stiffening and Setting Properties – EN 13395-2 as per EN 1504-3 Table 2 note b / EN 13294					
Stiffening	60 mins	Initial Set	240 mins	Final Set	360 mins

Properties – EN 1504 Requirements			
Characteristic	Test Method	Declared Value	
Compressive Strength	EN 12190	Age	Flowable
		1 day	≥ 30 MPa
		7 day	≥ 60 MPa
		28 day	≥ 65 MPa
Flexural Strength	EN 1015-11	1 day	≥ 6 MPa
		7 day	≥ 9 MPa
		28 day	≥ 11 MPa
Fresh Wet Density	EN 1015-6	Nominally 2270 kg/m³	
Adhesive Bond Strength (by Pull-off)	EN 1542	≥ 2.0 MPa	
Chloride ion Content	EN 1015-17	≤ 0.05%	
Carbonation Resistance	EN 13295	Pass	
Elastic Modulus	EN 13412	23 GPa	
Thermal Compatibility (Part 1 – Freeze-thaw)	EN 13687-1	≥ 2.0 MPa	
Testing of Anchoring Products by pull out method	EN 1881	≤ 0.6mm @75kN load (wet & dry)	
Resistance to Fire	EN 1504-3	Class A1	


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#### Compliance

KPRO NSG 2601-TS is tested and marketed in accordance to CPR 305/2011 and complies with classification R4 according to EN 1504-3 and the requirements of EN 1504 -6: Anchoring of reinforced steel bar.

	
Kilsaran Concrete, Piercetown Dunboyne Co. Meath Ireland 24	
EN1504-3 Concrete repair products for structural repair CC mortar (based on hydraulic cement) :	
Compressive Strength	R4 ( $\geq 45$ MPa)
Adhesive Bond by pull-off	$\geq 2.0$ MPa
Chloride ion content	$\leq 0.05\%$
Carbonation Resistance	Pass
Elastic Modulus	23 GPa
Thermal Compatibility – Part 1: Freeze-thaw	$\geq 2.0$ MPa
Testing of anchoring products By pull-out method	$\leq 0.6\text{mm @ } 75\text{kN load}$
Resistance to fire	Class A1
Dangerous Substances	Complies with 5.4 of EN 1015 parts 3 & 6

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