

PRODUCT DATA SHEET

LANKO 701 Duragrout

Class C Dual Expanding Structural Grout

DESCRIPTION

LANKO 701 Duragrout is a high strength, dual expanding, Class C structural grout. It is designed to undergo controlled expansion in the plastic state, while counteracting the shrinkage normally associated with portland cement in the hardened state. LANKO 701 Duragrout has been formulated to achieve high early strengths with low water addition levels.

USES

- Anchor bolts
- Underpinning walls
- Structural column grouting
- Under heavy machinery
- Crane rail and conveyor supports
- Bridge bearings
- Post tensioned concrete ducts
- Under precast panels

FEATURES

- Shrinkage compensated in both the plastic and hardened state
- High strength for precision grouting installations
- Versatile - can be used in dry pack, plastic and flowable consistencies
- Extended workable time

PRODUCT INFORMATION

Packaging	Available in 20 kg (moisture resistant multiwall) bag
Colour	Grey powder
Shelf life	6 months
Storage conditions	In dry conditions and unopened original packaging.
Density	2,200 kg/m ³ - dependent on water addition rate

TECHNICAL INFORMATION

Compressive strength	Consistency	1 Day	7 Days	28 Days	(AS 1478.2)
	Dry Pack	~ 40 MPa	~ 70 MPa	~ 80 MPa	
	Plastic	~ 35 MPa	~ 50 MPa	~ 70 MPa	
	Flowable	~ 20 MPa	~ 50 MPa	~ 60 MPa	

Material and curing conditions at 23°C / 50% r.h. The results above are tested on 50mm x 50mm cube specimens (Flowable consistency)

Flexural-strength**ASTM C348**

1 day
7 days
28 days

Flexural strength

~ 5 MPa
~ 9.5 MPa
~ 10.0 MPa

APPLICATION INFORMATION**Mixing ratio****Consistency**

Dry Pack
Plastic
Flowable

Water per 20 kg bag (litre)

2.0 L - 2.5 L
2.5 L - 3.0 L
3.0 L - 4.0 L

Yield

	Dry Pack	Plastic	Flowable
~ yield/20 kg bag	~ 10 L	~ 10.5 L	~ 11 L
~ no of bags/1m ³	~ 98	~ 96	~ 94

Layer thickness

10mm-100mm thickness

Material temperature

between 5°C and 35°C

Flowability

400-600mm (flow through)

(AS 1478.2:2005)

Initial set time

~ 2 hours

Final set time

~ 3 hours

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.

IMPORTANT CONSIDERATIONS

- The strength values mentioned are the average values of laboratory test results.
- The results on the site may vary due to different environment, curing conditions and test
- For detailed information on grouting application and guidelines, refer to Sika Grouting Method Statement.
- Store LANKO 701 Duragrout in dry conditions in unopened original packaging.
- Never apply to a dry substrate.
- Do not retemper LANKO 701 Duragrout with additional water
- Like all cementitious mortars and concrete, LANKO 701 Duragrout must be protected against rapid drying caused by high temperatures and / or strong winds.

ECOLOGY, HEALTH AND SAFETY

- Safety Data Sheet is available from <https://aus.sika.com>
- Being cement-based, LANKO 701 Duragrout is alkali in nature which can cause dermatitis. When using LANKO 701 Duragrout it is recommended that applicators wear PVC or similar gloves and safety goggles while handling this product.
- If dust is generated, wear a suitable dust mask.

APPLICATION INSTRUCTIONS**EQUIPMENT**

LANKO 701 Duragrout must be mechanically mixed using a mechanical grout mixer or a suitable drum mixer. The grout mixer will reduce the chances of the mix becoming lumpy or aerated. Smaller quantities should be mixed in clean drum using an electric drill and spiral drill and spiral mixer at a speed of approximately 500 rpm. **DO NOT MIX BY HAND.**

SUBSTRATE QUALITY / PRE-TREATMENT**Surface Preparation**

- For all surfaces, loose contaminants and unsound concrete must be chipped away so that a reasonably rough, but strong sound surface is provided
- All surfaces must be free from oil, grease and dust. This particularly applies to the underside of bed-plates, bolts, pipes or other materials, which may have surface contact with the grout
- Holes and depressions may be cleaned with compressed air to remove loose particles
- The perimeter of any grouting area in a concrete substrate should be sawcut to provide a minimum of 10mm mechanical key for the grout

Formwork

- The formwork used must be leak proof to allow for free flowing LANKO 701 Duragrout.
- The formwork should be arranged so that the grout head is maintained on the side above the level of the underside of the base plate. This will allow gravity flow to completely fill the void to be grouted.
- Formwork should be coated with form oil to allow easy removal of forms.
- Ensure adequate air holes are provided.

Temperature Control

Temperature affects setting time and rate of increase for strength. For optimum performance maintain grout, concrete and/or steel substrates within the range of 18°C-25°C prior to, during, and for 48 hours after placement of the grout.

Primer Preparation

- After cleaning, saturate the concrete surface with clean water for approximately 2 hours prior to applying LANKO 701 Duragrout
- For horizontal hole pours, fill the hole with a twisted rag, which can then be periodically wetted
- Ensure that no freestanding water is present on surfaces of foundations or in bolt holes. Remove any free water by use of compressed air or dry towels

MIXING

- Mix with an electric drill and paddle or in a pan or revolving barrel type mixer.
- Do not mix by hand.
- Allow approximately 5 minutes mixing to achieve maximum results.
- Place 70% of the required amount of water into the mixing vessel and slowly add the powder while mixing. Gradually add the remainder of the water to achieve the desired consistency.

APPLICATION

- LANKO 701 Duragrout grout should be placed within 20 minutes of mixing to gain the benefit of plastic expansion. During that time keep material in mixer well agitated. After this time discard any grout mix that shows signs of stiffening.
- Flowable LANKO 701 Duragrout may be placed with lowpressure cement grouting equipment or may be hand rodded into restrained sections. High points must be adequately vented to allow entrapped air to escape.
- Plastic LANKO 701 Duragrout mortar may be rodded into place or trowel handled where freedom of movement permits. Consistency can range from thick cream to smooth plastic.
- Do not vibrate LANKO 701 Duragrout into position as this may cause segregation of the mix.
- Dry pack LANKO 701 Duragrout mortar must be firmly pressed or rammed into place. Consistency should allow pressuring into a firm hard ball without cracking.
- For sealing rebar or steel rods and bolts into bore holes, adhere to the following guidelines. For vertical holes: Position the bar in the hole, and then pour in the flowable LANKO 701 Duragrout. Alternatively, fill the hole with LANKO 701 Duragrout, then insert the rod or bolt into the wet mix, pushing in and pulling back several times to ensure sound bonding.

For horizontal holes: Fill the hole with plastic consistency LANKO 701 Duragrout, then insert the rod or bolt, pulling and pushing as above.

- LANKO 701 Duragrout may be pumped for large grouting installations.
- All applications require curing. Cover the installed grout with wet hessian sheets or spray periodically with water.
- Placing LANKO 701 Duragrout in unrestrained environments will result in lower final compressive and flexural strength.

Aggregate Extension

- 10mm washed coarse aggregate may be added to LANKO 701 Duragrout for pours over 100mm in depth
- Add no more than 10kg of aggregate to each 20kg bag of LANKO 701 Duragrout
- After extending with gravel, do not place LANKO 701 Duragrout in thicker sections than 200mm

CLEANING OF EQUIPMENT

LANKO 701 Duragrout should be removed from tools and equipment immediately after use with clean water. Any cured material may be removed by mechanical means

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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Product Data Sheet

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May 2025, Version 01.01

020201010010000380

LANKO701Duragrout-en-AU-(05-2025)-1-1.pdf