



# LANKO 701

## DURAGROUT

CLASS C DUAL EXPANDING STRUCTURAL GROUT

### WHERE TO USE

Davco 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

### PRODUCT INFORMATION

#### Application

10-100mm thickness

#### Set Time

Final set 3 hours



**MADE IN  
AUSTRALIA**

### FEATURES & BENEFITS

- 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

### PACKAGING

Available in a 20kg (moisture resistant multiwall) bag

## TECHNICAL

TECHNICAL DATA	LANKO 701
Appearance	Grey powder
Shelf life when stored unopened in elevated, cool, dry location and protected from high humidity	Up to 6 months

Values presented are typical and not necessarily referenced to create specifications. All measurements are taken at 20°C and 50% relative humidity. Specifications vary according to site conditions and should be taken as a guide only.

TEST DATA	CRITERION		TYPICAL TEST RESULT		
Test method: AS 2350.11					
Compressive Strength MPa	Consistency	Water Addition	1 Day	7 Days	28 Days
	Dry Pack	2.5	45	70	88
	Plastic	3.0	36	54	73
	Flowable	3.5	26	56	61
Test method: EN 1542: 1999					
Bond strength by pull off			2.6MPa		
Test method: EN 1015-17:2000					
Chloride ion content			0.004%		
Test method: EN 196.1 2016					
Flexural strength (modulus of rupture)	1 day		5.0 MPa		
	7 days		9.5 MPa		
	28 days		10.1MPa		

Test method: AS 1012.18.1996		
Setting time	Initial Set	2 hours
	Final Set	3 hours
Fresh wet density	2200kg/m <sup>3</sup> - depending on consistency used	
Test method: AS 1478.2:2005		
Flow characteristics	400-600mm (flow through)	
Minimum thickness	10mm	
Maximum thickness	100mm	
Test method: RMS T363		
Alkali reactive particles	<0.1% (Non-reactive)	



Davco products manufactured in Australia are produced in accordance with quality management systems certified as complying with AS/NZS ISO 9001:2008.

Quality ISO 9001



## DIRECTIONS FOR USE

- A test should be undertaken in all cases to ensure suitability

## 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 bedplates, 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

## 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

## MIX PREPARATION

### Mix Ratio

Use as little water as is required in the mix for ease of placement. Water addition is recommended as set out below:

MIX CONSISTENCY	MIX REQUIREMENTS PER 20KG
Dry Pack	2.0-2.5L of clean, potable water
Plastic	3.0L of clean, potable water
Flowable	3.5-4.0L of clean, potable water

- Adjustments to the mixing ratio may be required depending upon site conditions. Ideally, mixing water and substrate should be above the lower application temperature limit of 5°C and below 30°C to avoid problems with the set time of the mix

## Mix Process

1. Mix with an electric drill and paddle or in a pan or revolving barrel type mixer.
2. Do not mix by hand.
3. Allow approximately 5 minutes mixing to achieve maximum results.
4. 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.

## Yield

WATER ADDITION PER 20KG BAG	YIELD (L)	KG/M <sup>3</sup> (WET)	BAGS PER M <sup>3</sup>
Dry Pack	10.40	1.87	85
Plastic	10.55	2.18	95
Flowable	11.50	2.09	87

## APPLICATION

### Pre-Application

1. Holes intended for sealing may be either cylindrical or rhombic (dove tailed).
2. The diameter of bore holes in which rebars or rods are to be sealed should be at least 20mm more than the diameter of the bar.
3. The depth of the hole must not be less than 10 times the diameter of the bar or rod.

### Application Techniques

1. 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.
2. Flowable Lanko 701 DuragROUT may be placed with low-pressure cement grouting equipment or may be hand rodded into restrained sections. High points must be adequately vented to allow entrapped air to escape.
3. 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.

4. Do not vibrate Lanko 701 DuragROUT into position as this may cause segregation of the mix.
5. 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.
6. 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.
7. Lanko 701 DuragROUT may be pumped for large grouting installations.
8. All applications require curing. Cover the installed grout with wet hessian sheets or spray periodically with water.
9. 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

## Clean-up & Return to Service

- 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
- The period of time required before bringing the grouted area into service depends upon the service load required. For high load installations, do not put the area into service for 3-7 days. The ambient temperature should be taken into account since cold weather delays hardening and hot weather accelerates hardening

## PRECAUTIONS

### Safety

- SDS is available from [www.davcoaustralia.com.au](http://www.davcoaustralia.com.au)
- 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

### General

- Ensure all surface preparation and priming instructions are followed precisely

### Specific

- 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.
- Lanko 701 Duragrout is not defined as a dangerous good by Australian Code for the Transport of Dangerous Goods by Road and Rail
- For application thicknesses exceeding 200mm, please contact Sika Australia.
- For application procedures or surface conditions not specified above, please contact Sika Australia.

### LEGAL NOTES

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#### Sika Australia Pty Ltd

55 Elizabeth Street, Wetherill Park NSW 2164 | 1300 22 33 48 | [aus.sika.com](http://aus.sika.com)

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