

CLASS A GENERAL PURPOSE GROUT NON SHRINK, HIGH STRENGTH

S T R U C T U R A L G R O U T I N G

LANKO

DESCRIPTION:

Lanko 702 Durabed is a high strength Class A structural grout for most normal grouting installations. Gaseous expansion in the plastic state ensures positive contact and load transfer in structural grouting applications.

USES:

Typical uses would be:

- Under heavy machinery
- Under column bases
- Anchor bolts
- Bearing plates
- In-fill for cavity blockwalls
- Under precast panels
- Underpinning walls
- Conveyer supports
- Also suitable for repairing minor flaws in concrete structures.

FEATURES:

- Shrinkage compensated in the plastic (wet) state.
- Extended working time.
- High compressive and flexural strengths.
- Economical.
- Low segregation of aggregate and fine particles at high water levels, ensuring uniform results.
- Does not contain chloride accelerators or iron powders, so will not cause rusting or staining of surfaces and metal elements.
- Ready to use – just add water.
- Appearance similar to concrete when cured.
- Controlled gaseous expansion in the plastic state ensures positive contact and load transfer which is essential for structural grouting applications.
- Reaches in excess of 75% of final compressive strength in seven (7) days enabling early operation of plant and equipment.
- Contains no iron which otherwise would result in staining and destruction of the grout.
- May be pumped, hand rodded, trowelled, rammed and flowed into intricate or other areas where normal grouting methods do not suffice. This

makes application more effective and convenient.

- Low water requirements particularly in the plastic state results in high early strength and long term performance.

TEST DATA:

PROPERTIES

Appearance	Grey Powder
Expansion	2 – 4%
Expansion Start Time:	Within 10 mins
Expansion Finish Time:	3 hours
Initial Set* at 20°C :	3 hours
Final Set* at 20°C:	4 hours
Min Application Temp	5°C
Max Application Temp	35°C
Application Thickness:	10 – 100mm
* Measured at Plastic Consistency	

COMPRESSIVE STRENGTH

Water Addition	MPa*
2.00	71
2.50	67
3.00	59
3.25	54
3.50	52
4.00	48

* tested in accordance with AS/NZS 2350.11 after 28 days wet cure.

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FLOW CHARACTERISTICS

Water Addition	Flow %	Category*
2.00	100	Dry pack
2.50	117	Normal
3.00	125	Normal
3.25	132	Normal
3.50	145	Normal
4.00	182	Normal
4.25	200	Plastic*
4.50	216	Plastic*
4.75	234	Flowable*
5.00	244	Flowable*
5.00	27 secs efflux	Fluid*

* tested in accordance with ASTM C1107-02 on a mortar drop table and ASTM C939 flow cone test.

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 saw-cut a minimum of 10mm to provide a mechanical key for the grout.

SURFACE PRIMING:

- After cleaning, saturate the concrete surface with clean water for approximately 2 hours prior to applying Lanko 702 Durabed.
- For horizontal hole pours, fill the hole with a water soaked twisted rag, which can then be periodically rewetted.
- 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 INSTRUCTIONS:

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

Mix Consistency	Water Addition per 20KG bag
Dry Pack	2.00 – 2.20L
Normal	2.25 – 4.25L
Plastic*	4.25 – 4.60L
Flowable*	4.60 – 5.00L
Fluid*	5.00 – 5.10L

* tested in accordance with ASTM C1107-02 on a mortar drop table and ASTM C939 flow cone test.

- ASTM C1107 – 02 does not categorise grout flow consistencies between 100 and 200%. However, for many applications, Lanko 702 Durabed may be mixed at water addition rates between 2L and 4L of water per 20kg bag.
- 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 5⁰C and below 30⁰C to avoid problems with the set time of the mix. Small trial batches to ascertain the best working consistency for the operation are recommended.
- 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. Job placement conditions, including temperature and humidity, may lead to some adjustments in the amount of water addition.

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PRE-APPLICATION:

- Holes intended for sealing may be either cylindrical or rhombic (dove tailed).
- 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.
- The depth of the hole must not be less than 10 times the diameter of the bar or rod.

APPLICATION TECHNIQUES:

- Lanko 702 Durabed grout should be placed within 45 minutes of mixing. During that time keep material in mixer well agitated. After this time discard any grout mix that shows signs of stiffening.
- Flowable Lanko 702 Durabed 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.
- Plastic Lanko 702 Durabed 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 702 Durabed into position as this may cause segregation of the mix.
- Dry Pack Lanko 702 Durabed mortar must be firmly pressed or rammed into place. Use metal or hardwood tamping tools and suitable trowel equipment. 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 702 Durabed. Alternatively, fill the hole with Lanko 702 Durabed, 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 702

Durabed, then insert the rod or bolt, pulling and pushing as above.

- Lanko 702 Durabed may be pumped for large grouting installations.
- All applications require curing. Use Lanko 740 Duracure, which can be brush or spray applied. Otherwise, cover the installed grout with wet hessian sheets or spray periodically with water.
- Placing Lanko 702 Durabed in unrestrained environments will result in lower final compressive and flexural strength.

AGGREGATE EXTENSION:

- 10mm washed coarse aggregate may be added to Lanko 702 Durabed for pours over 100mm in depth.
- Add no more than 10kg of aggregate to each 20kg bag of Lanko 702 Durabed.
- After extending with gravel, do not place Lanko 702 Durabed in thicker sections than 200mm.

RETURN TO SERVICE:

- 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.

COVERAGE/YIELD:

Water Addition per 20KG bag	Yield (L)	KG/m ³ (wet)	Bags per m ³
2L	10.75	2050	93
3L	10.45	2200	96
4L	11.25	2130	89

CLEAN-UP INSTRUCTIONS:

- Lanko 702 Durabed should be removed from tools and equipment immediately after use with clean water. Any cured material may be removed by mechanical means.

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PRECAUTIONS:

- Ensure all surface preparation and priming instructions are followed precisely.
- For grouting application thicknesses exceeding 200mm contact Lanko State Offices.
- Do not retemper Lanko 702 Durabed with additional water.
- Like all cementitious mortars and concrete, Lanko 702 Durabed must be protected against rapid drying due to high temperatures and/or strong winds.
- Lanko 702 Durabed is not defined as a dangerous good by Australian Code for the Transport of Dangerous Goods by Road and Rail.

PACKAGING:

Lanko 702 Durabed is available in 20kg moisture resistant multiwall bags.

SHELF LIFE / STORAGE:

- Storage: must be stored in a cool, dry elevated place and protected from high humidity.
- Shelf Life: Up to 6 months in unopened bags, if stored as specified above

SAFETY:

- Being cement based, Lanko 702 Durabed is alkali in nature, which can cause dermatitis. Thus, when using Lanko 702 Durabed, it is recommended that applicators wear PVC or similar gloves and safety goggles. If dust is likely to be generated, wear a suitable dust mask.
- For a full MSDS on this product, contact the Lanko Technical Advisory Line or visit www.lanko.com.au

TECHNICAL SERVICE:

For application procedures or surface conditions not specified above, please contact the Lanko Technical Advisory Line on 1800 653 347 or visit our website on www.lanko.com.au.

DISCLAIMER:

The use of this product is beyond the manufacturer's control, and liability is restricted to the replacement of material proven faulty. The manufacturer is not responsible for any loss or damage arising from incorrect usage. All workmanship must be carried out in accordance with Davco's specific instructions.

The information contained herein is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of the product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

Davco

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