



ARDEX CE 707

Sprayable High Build Shotcrete

Low electrical resistivity

Low rebound and dust generation

Highly durable, microsilica-modified

High build – up to 300mm thick in one pass

Ideal for localized patch repair and reinstatement of large areas of concrete

ARDEX Australia Pty Ltd
2 Buda Way,
Kemps Creek, NSW 2178
Phone: 1300 788 780
Email: technicalservices@ardexaustralia.com
www.ardexaustralia.com

ARDEX New Zealand Ltd
15 Alfred Street, Onehunga Auckland,
New Zealand 1061
Phone: 0800 227 339
Email: info@ardexnz.com
www.ardex.co.nz

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Sprayable High Build Shotcrete

DESCRIPTION

ARDEX CE 707 is a high strength, dry-spray shotcrete for structural concrete repair. It is formulated using a blend of well graded sand, portland cement and special chemical additives for infrastructure projects where impressed current cathodic protection systems are used.

ARDEX CE 707 delivers outstanding performance in dry spray shotcreting with less rebound loss and thicker applications with each pass.

USES

- Beams
- Tunnels
- Sea walls
- Retaining walls
- Parking garages
- Slope stabilization
- Wharfs and jetties
- Storm water culverts
- Repair for structural members in buildings

ADVANTAGES

- High build
- Chloride free
- One component
- High bonding strength
- Low rebound and dust generation
- High chloride and sulphate resistance
- Low electrical resistivity – compatible with impressed current cathodic protection systems

SURFACE PREPARATION

The substrate must be clean, sound and free from all grease, oil, dust and other surface contaminants such as curing membranes. Damaged or contaminated concrete must be removed to obtain a good bond to the substrate. Mark out the area of repair.

Cut the edges of the repair vertically to a minimum depth of 20mm. All surface laitance must be removed. Exposed reinforcing steel should be cleaned (minimum ST 3 cleanliness) to remove all residual rust and concrete residue. The substrate must be prepared correctly (minimum CSP 6) to remove all the deteriorated and detached concrete until a strong substrate with a rough surface is obtained. Any areas previously repaired and which are not perfectly bonded must

also be removed. Concrete should be removed from around and behind all corroding rebar to a depth of 20mm to allow proper placement and avoid future contamination of the repaired area.

PRIMING

To reduce the porosity of the substrate, priming the prepared substrate with ARDEX WR Prime is recommended. Alternatively, the prepared substrate can be saturated with water for at least 6 hours before applying ARDEX CE 707. Remove excess freestanding water on the surface prior to the application of ARDEX CE 707.

Note that primers may interfere with ICCP system operation so it is recommended to achieve Saturated Surface Dry SSD by soaking the surface for at least 2 hrs before applying ARDEX CE 707. A light slurry of GP cement and water may also be used as a primer where ICCP systems are in operation.

REINFORCEMENT STEEL

The reinforcing steel should be cleaned to minimum ST 3 cleanliness using hand tools such as grinders, wire brushes or SA 2.5 using abrasive blasting. In case the reinforcing steel is corroded and has lost more than 20% of its diameter, it has to be cut and removed. If chloride contamination is present, then high pressure wet blasting is required to remove the chlorides and other contaminants.

APPLICATION

Break the bag to drop ARDEX CE 707 into the shotcrete machine. The air and water pressure at the nozzle shall be suitably adjusted such that there is no sagging, sloughing or dropout. The sprayed shotcrete shall be applied at an angle as close as possible to 90 degrees to the substrate, and at a distance of between 0.5 and 1m between the nozzle and the substrate. Application shall start from the bottom and be completed at the top. Care is required to avoid the formation of voids behind the reinforcement. Clean the spray machine immediately after the application.

CURING

As with all cementitious products ARDEX CE 707 must be cured properly to ensure maximum performance. Curing compounds should be applied onto the surface of the ARDEX CE 707 according to the Technical Datasheet of the curing compound. If a curing compound was not used, wet hessians and/or plastic sheets should be placed on the surface after initial set for 3 - 7 days.

PACKAGING

20kg bag

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TECHNICAL DATA

Mixing Ratio	2.4L - 2.6L clean water per 20kg bag
Coverage	20kg of powder yields approx. 9.6L of mortar when mixed with 2.4L of water. 1m ³ of mortar requires approx. 104 bags of 20 kg powder mixed with 2.4L of water.

CHARACTERISTIC	TEST METHOD	TEST RESULT
Compressive Strength:		
1 day	BS EN 12190 : 1999	> 20 Mpa
7 days		> 45 Mpa
28 days		> 65 Mpa
Flexural Strength	BS EN 12190 : 1999	> 9.0 Mpa
28 days		
Adhesion Strength	BS EN 1542 : 1999	> 1.5 MPa
Wet Density	BS EN 1015-17 : 2000	2290 ± 100kg/m ³
Setting Time		
Initial Set	ASTM C953 : 2017	> 30 min
Final Set		< 180 min

Technical data according to ARDEX Quality Standards. All data based on a partial, in-lab mix at 23 ± 2°C and RH 55 ± 10%, water powder ratio 0.11

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LIMITATIONS

Do not over-water as this can lead to sagging, shrinkage, and strength reduction. Store bags and water reservoir for mixing in a shaded or conditioned space. Cool water and powder can greatly extend the working time in hot conditions.

Before any substrate preparation, installation or finishing methods relating to ARDEX product are undertaken, please be aware of any potential risks and use appropriate PPE (personal protective equipment). This may involve contacting substrate manufacturers for Safety Data Sheets.

SHELF LIFE

ARDEX CE 707 has a shelf life of 12 months when stored in the original, unopened packaging in a dry place at 23°C and 50% relative humidity.

CLEAN UP

Clean the dry spray machine using air gun and clean nozzle with water immediately after use

SAFETY DATA

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. May cause cancer. Causes damage to organs through prolonged or repeated exposure. Store locked up. Store in a well-ventilated place. Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. Always refer to product safety datasheet (SDS) at ardexaustralia.com.au.

GUARANTEE

ARDEX Australia Pty Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us for 10 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 2 Buda Way, Kemps Creek, NSW 2178; Toll Free: 1800 224 070; Email: technicalservices@ardexaustralia.com) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the Australian Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss of damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

DISCLAIMER

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable Australian Standards. Our instructions and recommendations are only for the uses they are intended. Users are advised to confirm that this product is suitable for their application and conforms with the specifications of the system. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may affect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. You should make yourself familiar with them.

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