

Duragard 403

High performance damp-tolerant solvent free epoxy resin coating

Innovative products for your success

Description

Duragard 403 is a high performance damp-tolerant two pack solvent free epoxy resin material. It is supplied in pre-measured quantities ready for site mix use. The material cures to provide a smooth, tough and resistant finish.

Uses

As a protective coating for concrete and mild-steel. It is particularly used where concrete surfaces are damp and could not be dry fast. The cured film is corrosion, chemical and abrasion resistant and is suitable for application as follow:

- Sewage works
- Suitable for use in confined areas
- Able to apply directly to mild steel and concrete
- Achieve smooth, glossy and easy to clean the surface
- Excellent corrosion, chemical and abrasion resistant
- Able to apply to damp surfaces
- Marine environments
- Basements
- Tunnels
- Subways
- Airports

Advantages

- Easy to apply
- High build application
- Excellent performance

Specification Clause

The chemical and abrasion resistant coating shall be of a solvent free epoxy, specifically designed to work as corrosion, chemical and abrasion resistant lining for application to damp surfaces and to provide a tough, impermeable and resistant film.

Design Criteria

Duragard 403 is designed to be applied in two coats to achieve a minimum total dry film thickness of 400 microns. To achieve the correct protective properties, Duragard 403 must be applied on to the surfaces at the coverage rates as recommended.

Technical Support

Cemkrete offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Properties

Volume solids :	100%	
Pot life :	<u>@ 25°C</u> 30-40 mins	<u>@ 35°C</u> 10-15 mins
Water Permeability Resistance :	No water penetration	
Bond Strength (BS1881 Part 207) :	> 2.00 N/mm ²	
Dynamic Crack Bridging :	Passed	
Salt Spray Resistance (BS 1881: Pt 4: 1988) :	Passed	
Sea Water Immersion Resistance (BS1881:Pt 124:1988) :	Passed	
The fully cured film is resistant to:	Distilled water Petrol Xylene 50% sulphuric acid Saturated sodium chloride 50% sodium hydroxide	

Resistance to other specific chemicals should be consulted with Cemkrete office.

Instructions for Applications

Preparation

Concrete surfaces

All surfaces must be smooth, sound and free from debris, loose or flaking material and areas of standing water. Surfaces must be free from contamination such as oil, grease, dust, loose particles and organic growth. Concrete surfaces must be fully cured, laitance free and free from any traces of shutter release oils and curing compounds. All surfaces should then be grit blasted to remove any foreign matter, and provide a suitable key for Duragard 403. All blow holes and imperfections should be filled with Epoxy putty. Consult the local data sheet for pot life and over-coating time.

Steel surfaces

All surfaces should be grit blasted to meet the requirements of BS 4232, First Quality. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

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Priming

Priming is not normally required provided the substrate is sound, untreated and good quality non porous concrete. If any doubts exist of the quality of the concrete, or if it is porous it should be primed with Primer 500. Contact the local Cemkrete office for advice. Primer 500 should be mixed in the proportions supplied. Add the entire contents of the hardener can into the base can. When thoroughly mixed, preferably using a slow speed drill with paddle, the mixed primer should then be applied in a thin continuous film, using rollers or stiff brushes. Work the primer well into the surface of the concrete taking care to avoid ponding or over application. The primer should be left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

Mixing

The contents of the base cans should be stirred thoroughly to disperse any settlement. The entire contents of the hardener can should be added to the base container and mixed thoroughly until a uniform consistency is obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed, using appropriate mixing paddle on a heavy duty, slow speed electric drill.

Application

Number of coats :	2
Theoretical application Rate per coat :	0.2 liters per m ²
Theoretical wet film Thickness per coat :	200 microns
Over-coating times :	@ 5°C : 18-48 hours @ 20°C : 6-18 hours @ 35°C : 2-6 hours
Fully cured :	@ 5°C : 14 days @ 20°C : 7 days @ 35°C : 5 days

All surfaces should be treated with two coats of Duragard 403. The thoroughly mixed material should be applied with a suitable brush or roller. The first coat must be firmly applied and be well scrubbed into the surface, ensuring a uniform coating with a wet film thickness not less than 200 microns. The first coat should be allowed to dry for not less than 2 hours and not more than 16 hours at 35°C. and the second coat should be applied exactly as above, again achieving a wet film thickness not less than 200 microns. For cold weather working, it is recommended that Duragard 403 be stored in a heated building and removed immediately before use, as workability deteriorates and curing times increase at lower temperatures.

Cleaning

Duragard 403 Should be removed from tools and equipment with solvent (thinner AAA) immediately after use. Cured material can only be removed mechanically.

Estimating and Packaging

Supply

Duragard 403 : 4 liter packs

Coverage

Duragard 403 : 5.0 m²/litre
@ 200µ WFT per coat

Note: The coverage figure is theoretical and due to wastage factors and the variety of nature of substrates, the practical coverage figures may be substantially vary.

Storage

When stored in dry air conditioned stores at temperatures between 5°C and 30°C in the original, unopened containers all products have a shelf life of 12 months. If stored at high temperatures the shelf life will be reduced. Air conditioned storage at high ambient temperatures is recommended.

Additional Information

Cemkrete manufactures and supplies a wide range of those complementary products which includes:

- Waterproofing membranes & waterstops
- Joint sealants & filler boards
- Cementitious & epoxy grouts
- Specialized flooring materials
- Fireproof coating and systems
- Concrete admixture
- Repairing material

For further information on any of the above, please consult your local Cemkrete office - as below

Important Note: Cemkrete warrants its materials free of manufacturing defects and produced as per standard specifications and sold under the terms and conditions of usages, whilst Cemkrete endeavors to ensure that any advice, recommendation, or information, given through its products literatures are reflects of the R&D in-house lab test and practical sites experience and knowledge based feed backs, however, the products are being used under various conditions and applied beyond its control where or how either directly or indirectly at various locations and places at a different stages that of an intended purposes and uses. Therefore, Cemkrete cannot hold warranty or responsible for resultant consequences, such as damages to the property or assets but the product itself.