



## FOOD GRADE EPOXY COATING

CODE: D155

### PRODUCT DATA SHEET

EDITION: D2.05.2017

#### Description:

**D155 DURABUILD FOOD GRADE EPOXY COATING** is a two component, solvent free, epoxy resin material. It is supplied in pre-measured quantities ready for site mixing and use. The material cures to provide a smooth, hygienic and tough finish which is suitable for contact with potable water and foodstuffs. It is available in aquamarine blue and white colours.

#### Uses:

**DURABUILD FOOD GRADE EPOXY COATING** is used for lining and waterproofing potable water retaining structures and surfaces subject to contact with foodstuffs. The cured film is resistant to corrosion, chemical attack and abrasion and is suitable for application to reservoirs, tanks, silos, water treatment works, breweries, pharmaceutical, dairies and meat and food processing plants.

#### Features:

- **Food grade & Hygienic** – CFTRI approved for suitability to potable water and food stuff storage.
- **Compatible with all substrates** – Can be applied directly on to mild steel and concrete
- **Aesthetic** – Forms a smooth, glossy and to easy clean surface on curing
- **Abrasion resistant** – Exceptional resistance to abrasion and to a wide range of chemicals
- **Corrosion resistant** – Does not contain any metallic particles
- **Chemical resistant** – Proven against a wide range of industrial chemicals
- **Solvent free & Non – toxic** - No odor during application and can be used in confined areas.

#### Application Method:

##### 1 Surface 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 shuttering, release oils and curing compounds. All surfaces should then be grit blasted to remove all foreign matter and open up blow-holes, and provide a suitable key for DURABUILD FOOD GRADE EPOXY COATING. All blow holes and imperfections should be filled with DURABUILD EPOXY REPAIR MORTAR.



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#### Steel surfaces

All surfaces should be grit blasted to obtain bright metal surface. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

#### 2 Mixing

- The contents of the base should be stirred thoroughly to disperse any settlement. The entire contents of the hardener can should be poured into 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 a mixer or a heavy duty, slow speed electric drill fitted with a paddle.

#### 3 Application

Number of coats	:	2
Theoretical application rate per coat	:	0.16 kg per m <sup>2</sup>
Theoretical wet film thickness	:	100 microns
Over coating time	:	20 minutes @ 30°C
Fully cured	:	7 days @ 30°C
Minimum application temperature :		10°C

- Any surfaces should be treated with two coats of Durabuild Food Grade Epoxy Coating.
- The thoroughly mixed material should be applied with a suitable stiff nylon type brush.
- 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 100 microns. The first coat should be allowed to become tack free before applying the second coat.
- The second coat should be applied exactly as above, again achieving a wet film thickness not less than 100 microns.
- For ease of over-coating, it is recommended that the first coat be white and the second coat be blue, or vice - versa.
- For cold weather working, it is recommended that Durabuild Food Grade Epoxy Coating be stored in a heated building and removed immediately before use, as workability deteriorates and curing times increase at lower temperatures.

#### Precautions and Limitations:

- Durabuild Food Grade Epoxy Coating is formulated for application to clean sound concrete and steel.
- Durabuild Food Grade Epoxy Coating should not be applied over existing coatings.
- Application should not be undertaken if the temperature is 10°C and falling, nor when the prevailing relative humidity exceeds 90%.
- Although Durabuild Food Grade Epoxy Coating may be applied to damp concrete, there must be no standing or running water.
- Durabuild Food Grade Epoxy Coating, the final colour can vary with curing conditions, and in adverse conditions such as low temperature and/or high humidity, a white bloom may appear on the surface. However, this does not affect the performance of the coating.



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#### Standard Compliances:

IS: 9833-1981 – Epoxy resin contacts with foodstuffs, pharmaceuticals and drinking water.  
 21 CFR 175-300 of US-FDA – Contact with alcoholic foods and drinking water. **\*Tested at reputed CFTRI, Mysore**

#### Technical Data:

##### Technical Support:

Durabuild offers a comprehensive range of protective coatings. In addition, Durabuild offers technical support service to specifiers, end users and contractors, as well as on-site technical assistance in locations all over the country.

##### Design Criteria:

**Durabuild Food Grade Epoxy Coating** is designed to be applied in two coats to achieve a minimum total dry film thickness of 200 microns. To achieve the correct protective properties, it must be applied on to the substrate at the coverage rates recommended.

#### Technical Properties:

PARAMETERS	SPECIFICATIONS	TEST RESULTS
Mix Ratio (Part A Resin: Part B Hardener)		6:1
Solids in volume		100%
Viscosity		Pourable, spreadable liquid
Pot life		45 minutes @ 27°C
Hardness, Shore D	ASTM D 2240	85
Adhesion Strength N/mm <sup>2</sup>	ASTM D 4541	>3
Abrasion Resistance	ASTM D 4060	Passes
Tensile Strength (7 day), MPa	ASTM C 307	15
Compressive Strength (7 day), MPa	ASTM C 579	88
Flexural Strength (7 day), MPa	ASTM C 580	36
Food Grade Certification at CFTRI, Mysore		Passes
Water Penetration (5 bar pressure), %	BS EN 12390	No penetration observed at water pressure of 5 bar
Pot Life, Mins @ 27 c		45 -60 Min

#### Coverage area:

Durabuild Food Grade Epoxy Coating covers 6.0 m<sup>2</sup> per kg per coat at 100 micron thickness. The coverage figure is theoretical - due to wastage factors and the variety and nature of substrates, practical coverage figures may be substantially reduced.



**Packaging:**

Durabuild Corrosion Resistant Epoxy Coating is supplied in 3.5 kg and 7 kg combo packs

**Shelf Life:**

12 months if kept in dry store between 5°C and 30°C in the original, unopened containers. Storing in dry conditions at temperatures between 5°C and 30°C in the original unopened containers is recommended. If stored at high temperatures the shelf life may be reduced.

**Health & Safety:**

Durabuild Food Grade Epoxy Coating should not come into contact with skin and eyes or be swallowed. Some people are sensitive to resins, hardeners and solvents. Hence suitable protective clothing, gloves and eye protection shall be worn. The use of barrier cream provides additional skin protection. In case of contact with the skin, it shall be rinsed with plenty of clean water, and then cleansed with soap and water. Solvent should not be used. In case of contact with eyes, it shall be rinsed immediately with plenty of water and medical advice shall be sought immediately. If swallowed medical attention shall be sought immediately - Vomiting should not be induced.

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**OUR PRODUCT RANGE**

**IMPORTANT NOTE:** The product information and application recommendations for final use of Durabuild's products, are given in good faith based on Durabuild's vast knowledge and experience of products when properly stored, handled and applied under standard conditions as per Durabuild's recommendations. The user of the product must conduct trials and test to ensure the suitability of the product for intended application and purpose. Owing to the difference in other materials, actual site conditions and on-site workmanship factors which are beyond our control, the company shall not accept any liability either directly or indirectly arising out of use of our products whether or not in accordance with any advice, specification, recommendation or information given by it. Durabuild reserves the right to customise the properties of the product through minor adjustments or fine tuning in the formulation to meet the exact site requirements testimony to its continuing research and development. Users must refer to the most recent issue of product data sheet, copies of which can be made available on demand. Durabuild products are manufactured as per stringent national/international quality standards and are guaranteed against any manufacturing defect. All products are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request.

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