



Tough Coat

PU Based Waterproof Membrane

Pack Size
23Kgs, 20kgs & 10Kgs

TDS
Technical Data Sheet



Product Description

Tough Coat is a single-component, elastomeric, aliphatic polyurethane-based liquid-applied waterproof coating system. It cures to form a highly elastic, seamless, waterproof coating with excellent crack-bridging properties.

Characteristics/Advantages

Tough Coat offers excellent crack-bridging properties and forms an elastomeric membrane that cures aerial moisture to a flexible, rubbery coating. It is a single-component, ready-to-use product that makes application easy by brush, airless spray, or roller. The coating is economical, abrasion-resistant, hydrolysis-resistant, and root-resistant as part of a built-up system. It is resistant to mild acids, chemicals, industrial environments, and UV exposure. Additionally, it is low in VOCs and eco-friendly.

Uses

Tough Coat is a seamless, waterproof coating for roofs and concrete structures and a protective coating for infrastructure projects in non-trafficked areas. It waterproofs various substrates, including concrete, brickwork, asphalt, and corrugated asbestos sheets. It is suitable for inverted roof structures and podium waterproofing as part of a built-up system and can be applied to retaining walls before backfilling.

Product Information

Chemical Base	Aliphatic polyurethane-modified bituminous emulsion
Colour	White or other RAL colour
Shelf Life	12 months from the date of production
Storage Conditions	Store in original, unopened, and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C
Density	1.20±0.05 kg/litre
Solid Content by Weight	≥ 60%
Tensile Strength:	≥ 3.0 N/mm ² (After 14 days at +27°C with CLI pro membrane)
Elongation	> 250%

Dew Point	Beware of condensation! The substrate and uncured membrane must be at least 3°C above the dew point to reduce the risk of condensation
Pot Life	Approximately 3 hours at 30°C
Waiting Time / Overcoating	Primer to Base Coat: 2-4 hours First Tough Coat to Pro Membrane 1: Immediately in wet Base Coat Second Tough Coat on Base Coat: 24 hours Top Coat to Protection Screed: 7-10 days
Drying Time	The full cure requires about seven days at 30°C

Application Instructions

Substrate Preparation

The substrate must be clean, dry, and free of all contamination, such as dirt, oil, grease, and coatings that hinder adhesion. The substrate must be sound and of sufficient strength (minimum M25 Grade, 25 N/mm²). Minimum Pull-Off Strength must be 1.5 N/mm². Weak concrete must be removed, and surface defects such as blowholes and voids must be fully exposed. All dust, loose, and friable material must be removed entirely from all surfaces before application, preferably by brush and/or vacuum. Repairs to the substrate, filling of joints, blowholes/voids, and surface levelling must be carried out using appropriate products from the Carbolink range of materials. High spots must be removed by grinding.

Mixing

Prior to application, stir Tough Coat thoroughly to achieve a homogeneous mix.

Application

Apply a primer coat of Tough Coat diluted with 50% clean water, which will cure in 2-4 hours depending on atmospheric conditions, with an approximate consumption of ~0.25 kg/m² using a hard brush, roller, or airless spray. Apply the first Coat of approximately 0.50 kg/m² of Tough Coat, then apply Non-woven Geotextile fabric / Pro Membrane on the surface and ensure no bubbles or creases. Overlap adjacent Non-woven Geotextile fabric / Pro Membrane by a minimum of 50 mm and allow this Coat to dry for at least 24 hours, depending on atmospheric conditions. Apply a second coat of approximately 0.50 kg/m² to achieve the required film thickness. Avoid spoiling the dry surface while walking on it while applying the material. The material should be applied within the workable time. Full curing may take up to 7 days, depending on temperature and humidity.

Cleaning Tools

Clean all tools and application equipment with thinner immediately after use. Hardened and/or cured material can only be removed mechanically.

Further Documents

For optimum application, do not allow liquid Tough Coat to be heated by direct sunlight or other heat sources. It is unsuitable for permanent water immersion and, hence, not recommended for water-retaining structures such as RC tanks, swimming pools, water features, etc. During the curing process, microbubbles are formed. This is a product characteristic that does not affect the protective properties. For this reason, ensure the material is not applied at excessive film thicknesses in one layer. Excessive film thickness may create bubbles. The product can be applied by brush, roller, or airless spray. Work well with a brush under challenging areas. Apply subsequent layers after the first layer has cured tack-free. After Tough Coat has been exposed to UV light, it will start to yellow slightly without losing its physical properties. The product can be overcoated with itself. It is recommended to use a reinforced coating system; however, the performance of a standard coating system is also excellent.

Limitations

In case the viscosity of the product becomes higher due to changes in temperature and humidity at the time of application, the product should be diluted with water (20% maximum by weight, i.e., 4 kg of water for 20 kg of Tough Coat at the site to achieve a workable consistency). Water ponding tests shall be done only once the coating is fully cured. After the complete cure, the product is slightly tacky, so it is recommended to use a separation layer such as geotextile or PE sheet and cover it with a protection screed. Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish before coating work. Installing the coating when the concrete temperature is falling or stable can reduce outgassing. Therefore, applying the embedment coat in the late afternoon or evening is generally beneficial.

Note: Tough coat may swell or blisters/bubbles may form if directly ponded with water for more than 24 hours.

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Data Reliability

All technical data provided in this document are based on laboratory tests. Actual performance may vary due to factors beyond our control.

Regional Compliance

Product specifications may vary based on local regulations. Please refer to the local Product Data Sheet for precise information.

Legal Disclaimer

The information and recommendations regarding the application and end-use of Carbolink products are provided in good faith based on our current knowledge and experience. Due to variations in materials, substrates, and actual site conditions, no warranty of merchantability or fitness for a specific purpose can be inferred. The user must determine the product's suitability for the intended application. Carbolink reserves the right to change the properties of its products. All proprietary rights of third parties must be observed. Orders are subject to our current terms of sale and delivery. Always refer to the most recent local Product Data Sheet, available upon request.