

T-GUARD[®] CTE 45

Coal Tar Epoxy Resin Based Chemical Resistant Protective Coating for Concrete



T-GUARD[®] CTE 45 is based on coal tar and epoxy resins specially formulated to provide a durable coating suitable for application to both vertical and horizontal surfaces. Supplied as a two component system comprising a special blend of pitch epoxy resins and amine hardeners.

Uses

- Provides protection to concrete and steel structures against corrosion from aggressive environments.
- Suitable for tanks above ground or in totally submerged conditions such as pipelines.
- Particularly useful in sewage works, effluent plants and dock and harbour installations.

Benefits

- Excellent resistance to all types of water
- Easily applied by brush or spray
- Provides long term corrosion protection
- No priming necessary in most cases
- Chemical and abrasion resistant
- Economic and versatile product

Technical Support

Thermax provides technical advisory service on request, supported by a team of specialists in the field.

Properties

	20°C	35°C
Pot Life	3 hours	90 mins
Time between Coats	4 hours	2 hours
Initial Hardness	24 hours	16 hours
Full Cure	7 days	5 days
Below 20°C, these times will increase		
Mix Density	Approx. 1.23 gm/cc	
Volume Solids	>45%	
Adhesive Bond Strength (ASTM D 4541)	>2 N/mm ² with concrete	
Salt Spray Test (BS 1881) at 300 hours	Passes	
Accelerated Weathering at 400 hours (ASTM D 4587)	Passes	

Chemical Resistance

T-GUARD[®] CTE 45 has been tested for resistance to a comprehensive range of various chemicals and types of water, commonly encountered Tests were performed by constant immersion for 3 months at 30°C in the selected chemical solution. The fully cured coat is resistant to the attack of:

Water:

Sea Water Distilled Water Effluent Water
Ground Water Sewage Water

Atmosphere Conditions:

Exhaust & Sewage Gases Vegetables & Mineral Oils, Fats
Dilute Mineral Acids & Alkalis Barnacles & Organic Growths
Salt Solutions Organic Solvents

However at elevated temperatures or where mixtures of chemicals are involved then the effects may be different than those found in laboratory tests described above. Consult Thermax in case of doubt.

Specification Clauses

Protective Surface Coating

The protective coating shall be T-GUARD[®] CTE 45 a chemically resistant pre-packed, two part solvent, coal tar epoxy coating with a minimum of 45% volume solids. The total dry film thickness shall not be less than 100 microns and shall be capable of resistance to a wide range of industrial chemicals and all types of water. The cured film shall be tough and abrasion resistant. It shall be applied on the dry concrete or steel surfaces.

Instructions for Use

Preparation

Surfaces to be coated must be structurally sound, dry and free from loose material. All surface contamination must be removed. Grease and oil should be grit blasted or water jetted. Deeper penetration must be removed by mechanical means. Any laitance must be removed from concrete surface by etching with etching agent then washed off and dried.

T-GUARD[®] CTE 45



New concrete should be allowed to cure for at least 28 days prior to priming. Steel surfaces should be shot blasted to a profile of 125 microns.

It is essential that T-GUARD[®] CTE 45 is applied to sound clean, dry substrates in order to achieve maximum adhesion between the coating and substrate.

Mixing

Before mixing, the contents of each can should be thoroughly stirred to disperse any settlement which may have taken place during storage. The entire contents of the smaller hardener can should be poured into the base container and the materials thoroughly mixed for at least 3 minutes. Mechanical mixing using a slow speed (300 - 500 rpm) flame proof or air driven drill fitted with a mixing paddle is recommended.

Coating

Apply the mixed T-GUARD[®] CTE 45 to the dry, prepared substrate making sure a continuous film is achieved using a standard paint brush, good quality lambswool roller or spray equipment. The optimum dry film thickness of 100 microns is achieved in two coats.

Cleaning

Tools and equipment should be cleaned with Cleaning solution immediately after use.

Temperature Limitations

Minimum Application Temperature: 15°C. At temperatures below 15°C and above 40°C, please contact your local Thermax representative.

Health and Safety Instructions

Some people are sensitive to epoxy resins and coal tar products and may develop dermatitis on skin contact. Gloves and barrier creams should be used when handling cleaning SOLs and T-GUARD[®] CTE 45. If contact with the skin occurs, wash with soap and copious amounts of water. DO NOT USE SOLVENT. Direct contact with the eyes will cause irritation and may cause serious damage if left untreated. Any eye contamination should be washed thoroughly with plenty of water and immediate medical treatment sought. The use of goggles when mixing is recommended. Smoking to be avoided.

Fire

T-GUARD[®] CTE 45 and Cleaning Sol are flammable. Ensure adequate ventilation when using primers and solvents and do not use near a naked flame.

Flash Point

Cleaning Solution: 33°C
T-GUARD[®] CTE 45: 25°C

Storage

6 months shelf life if stored in unopened containers below 35°C.

Packaging

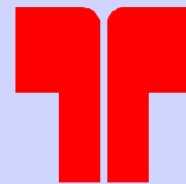
T-GUARD[®] CTE 45: 4 ltr pack
Cleaning Solution: 5 & 20 ltrs cans

Coverage

35 m²/pack/coat @ 100 microns WFT.

However, practical coverage depends on the nature and porosity of the substrate and application conditions.

T-GUARD[®] CTE 45



THERMAX

Thermax Limited
Environment House, Plot No.90-92
BG Block, MIDC, Bhosari,
Pune 411 026, India.
Tel: +91-20-67156000
Fax: +91-20-27120206
Customer Care: 18002090115 (India
toll free)
Email : enquiry@thermaxglobal.com

Ahmedabad

Tel: +91-79-26575408 • Fax: +91-79-65577270

Bengaluru

Tel: +91-80-22371721 • Fax: +91-80-22371726

Chennai

Tel: +91-44-24303400 • Fax: +91-44-24353841

Delhi

Tel: +91-11- 46087200 • Fax: +91-11- 26145311

Hyderabad

Tel: +91-40-23253700 • Fax: +91-40-23253799

Kolkata

Tel: +91-33-66070800 • Fax: +91-33-66070999

Mumbai

Tel: +91-22-67542222 • Fax: +91-22-22040859

Thermax World-wide

UK, USA, UAE, Germany, Belgium, Denmark,
Russia, Saudi Arabia, Thailand, Malaysia,
Bangladesh, Sri Lanka, China, Philippines,
Peru, Chile, Kenya, Nigeria, Brazil, Indonesia

Website: www.thermaxglobal.com

Thermax Business Portfolio

Chemicals

Absorption Cooling

Air Pollution Control

Boilers &Heaters

Power

Water & Waste Solutions

Solar

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

Disclaimer: The information contained in this document is true and accurate to the best of our knowledge and is based on our experience & test results. It is always the Company's endeavor to give true and accurate information however as it does not have any direct and/or continuing control on the use of the Products, the Company cannot accept any liability, direct or indirect as a consequence of the use of Products. In the event of any doubt upon any critical parameter it is advisable to seek clarification from our technical representative.