CORRO-TECH DM
ADVANCED WATER-BASED EPOXY COATING FOR LONG-TERM METAL PROTECTION

THORTEX CORRO-TECH DM is a high-performance, water-based epoxy coating engineered for direct application to metal surfaces.

Designed for minimal surface preparation, it delivers fast curing, superior corrosion protection, and reliable performance in a single coat.

Its advanced formulation allows direct application to both prepared metal and previously coated surfaces, ensuring durable and long-lasting protection.

Key Features

- **Eco-Friendly & Low VOC** – Water-based formulation for environmental compliance.
- **Fast Curing** – Ideal for complex and detailed surfaces.
- **Superior Corrosion Protection** – Long-term defense against rust and degradation.

PRODUCT FEATURES

- **Water-Based Epoxy** – Formulated for eco-friendly application with low VOC emissions, ensuring compliance with environmental regulations while maintaining excellent performance.
- **Fast Curing** – Designed for quick drying and reduced downtime, making it ideal for time-sensitive projects and complex surface applications.
- **Long-Term Corrosion Protection** – Provides a durable, protective barrier against moisture, chemicals, and environmental exposure, extending the lifespan of metal surfaces.

TYPICAL APPLICATIONS

THORTEX CORRO-TECH DM is a high-performance, two-component, water-based epoxy coating specifically engineered for **direct-to-metal** application. Offering **long-term corrosion protection** in a single coat, it eliminates the need for a separate primer by bonding seamlessly to both **prepared and previously coated** metal surfaces.

Ideal for a wide range of industrial and commercial applications, including:

- **Structural Steel** – Protects load-bearing frameworks from corrosion and environmental damage.
- **Gantries & Roof Purlins/Beams** – Ensures durability and resistance in exposed conditions.
- **Trackside Equipment** – Provides long-lasting protection against weathering and mechanical wear.
- **Hygienic Surfaces** – Creates a smooth, easy-to-clean coating ideal for sanitary environments.
- **Rail Bogeys & Vehicle Frames** – Enhances longevity and performance under high-stress conditions.
- **Railings & Safety Barriers** – Prevents rust and deterioration in outdoor and industrial settings.
- **OEM Valves & Pumps** – Protects critical components from moisture, chemicals, and corrosion.
- **Heavy Machinery & Equipment** – Extends service life in demanding industrial applications.

APPLICATION GUIDE

Phase 1: Surface Preparation

Proper surface preparation is essential to ensure optimal adhesion and long-term performance of **THORTEX CORRO-TECH DM**. The following methods are recommended based on substrate condition and project requirements.

Mechanical Abrasion (Handheld Grinding)
For metallic substrates requiring moderate surface preparation:

1. Degreasing: Remove all oil, grease, and contaminants using an appropriate cleaner such as MEK (Methyl Ethyl Ketone).
2. Surface Abrasion: Mechanically abrade the surface using handheld grinders to achieve SSPC-SP3 (Power Tool Cleaning) standard.
3. Final Cleaning: After abrasion, degrease and clean the surface thoroughly with MEK or an equivalent solvent.

Manual Abrasion (Wire Brushing or Sanding)
For applications where mechanical grinding is not feasible:

1. Degreasing: Eliminate all oil, grease, and surface contaminants using MEK or a suitable cleaner.
2. Surface Abrasion: Manually abrade the surface using a wire brush or abrasive paper to SSPC-SP2 (Hand Tool Cleaning) standard.
3. Final Cleaning: Once abraded, degrease and clean with MEK or a similar solvent to remove residual dust and contaminants.

Abrasive Blast Cleaning (Recommended for Maximum Adhesion)
For heavily corroded surfaces or where superior adhesion is required:

1. Degreasing: Remove all oil, grease, and surface contaminants using MEK.
2. Abrasive Blasting: Blast clean the surface to SSPC-SP10 / NACE No. 2 (Near-White Metal Blast Cleaning) standard, ensuring a minimum surface profile of 1 mil using an angular abrasive.
3. Final Cleaning: Following blasting, degrease and clean the surface with MEK or an equivalent solvent.

Hydro-Blasting (Water Jet Cleaning)
For environments where dry abrasive blasting is not practical:

1. Degreasing: Remove all surface oil and grease with MEK.
2. Hydro-Blasting: Use clean water at 850 bar to achieve NACE 5 (SSPC SP13 WJ3-WJ1) water-jetting standards.
3. Final Cleaning: Once hydro-blasted, degrease and clean with MEK or an appropriate solvent.

By following these surface preparation methods, **THORTEX CORRO-TECH DM** will achieve maximum adhesion and long-term performance.

⚠ Note: For salt-contaminated surfaces, pressure wash thoroughly with clean water and check for salt contamination. Refer to the Surface Preparation & Pre-Application Guide for further details.

Phase 2: Product Preparation

Before mixing, ensure the following:

- The base component is at a temperature between 60-77°F.
- The ambient and surface temperatures are above 50°F and both must be at least 6°F above the dew point.

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- Once these conditions have been met, proceed with mixing the product.

Phase 3: Product Mixing

For best results, follow these steps when mixing the full unit (5L / 20L):

1. Activator Addition: Transfer the entire contents of the Activator unit into the Base container.
2. Mechanical Mixing: Using an electric paddle mixer, blend the two components thoroughly until a uniform, streak-free consistency is achieved.
3. Pot Life: From the moment mixing begins, the entire material must be used within 90 minutes at 68°F to prevent premature curing.

Proper mixing ensures uniform application and maximizes the coating's performance.

Phase 4: Product Application

Brush or Roller Application

1. Prepare the Material: Pour the mixed product into a paint kettle or tray to maximize its usable life.
2. Stripe Coating:
    a. Using a 2-inch synthetic brush, apply a stripe coat to all edges, joints, corners, and equipment.
    b. The stripe coat should be approximately 4 inch wide with a wet film thickness of 75- 3-4 mils.
3. Full Coat Application:
    a. Once the stripe coat has cured sufficiently for overcoating, apply the mixed product evenly across all surfaces.
    b. Maintain a wet film thickness of 3-5 mils.
4. Second Coat Application:
    a. Allow the first coat to cure for approximately 4 hours at 68°F before applying a second coat.
    b. Apply the second coat at the same 3-5 mils wet film thickness.

Conventional Spray Application

1. Mixing & Preparation:
    a. Stir the product thoroughly before use.
    b. No thinning is required, but up to 5% clean water may be added if necessary.
2. Equipment Setup:
    a. Transfer the mixture into gravity-fed, suction-fed, or pressure pot spray equipment.
3. Application Guidelines:
    a. Spray at a minimum wet film thickness of 4 mils.
    b. Use a 0.05 inch spray tip.
    c. Maintain a spray pressure of 3-6 bar.

APPLICATION AT A GLANCE

Conventional Spray Application

Step 1 - Ensure you have the following:
1 x Base unit
1 x Activator unit
1 x Drill & Paddle
1 x Conventional or Airless spray equipment

Step 2 – Mixing:

- Pour the entire contents of the Activator tin into the Base unit.
- Using a drill and paddle mixer at a slow speed, mix the two components thoroughly until a uniform consistency is achieved.

Step 3 - Application:

- Apply using air or airless spray equipment.
- Thinning is not required, but up to 5% water may be added if necessary for ease of application.

Step 4 - Cleanup:

- Clean all equipment immediately after use with water to prevent product buildup and ensure longevity of spraying tools.

Roller or Brush Application

Step 1 - Ensure you have the following:
1 x Base unit
1 x Activator unit
1 x Drill & Paddle
1 x 2-inch wide brush or 1 x Roller & tray

Step 2: Mixing

- Pour the entire contents of the Activator tin into the Base unit.

Step 3: Blending

- Using a drill and paddle mixer at a slow speed, thoroughly mix the two components until a uniform, streak-free consistency is achieved.

Step 4: Brush Application

- Apply the mixed coating using a brush.
- Ensure a wet film thickness of 3-4 mils for proper coverage and protection.

Step 4a: Roller Application

- Apply the coating using a roller.
- Maintain a wet film thickness of 3-4 mils to achieve a consistent and durable finish.

TECHNICAL DATA & PERFORMANCE Characteristics

Appearance

Base	Red, Black, Grey Liquid
Activator	White Liquid
Mixed	Red, Black, Grey Liquid

Solids Content

45%

Mould & Bacteria Resistance

Excellent

Sag Resistance

Nill at 6 mils

Density

Base	1.4
Activator	1.08
Mixed	1.35

Mixing Ratio

Component	Base	Activator
By Weight	100	15
By Volume	5	1

Shelf Life

2 years if unopened and stored in normal dry conditions 60-86°F

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Coverage Rates

5LTRS of fully mixed product will give the following coverage rates -
536ft² at 4mil
20LTRS of fully mixed product will give the following coverage rates -
2,146ft² at 4mil
Please note that the coverage rates provided are theoretical and do not account for the profile or condition of the surface being repaired.

Cure Times

Useable Life

50°F	3 hours
68°F	90 minutes
86°F	45 minutes
104°F	22.5 minutes

Minimum Overcoating Time – Water Based & Solvent Free

50°F	8 & 24 hours
68°F	4 & 16 hours
86°F	2 & 16 hours
104°F	1 & 8 hours

Maximum Overcoating Times

50°F	96 hours
68°F	48 hours
86°F	24 hours
104°F	12 hours

Full Cure

50°F	7 days
68°F	3 days
86°F	2 days
104°F	1 day

Touch Dry

50°F	4 hours
68°F	2 hours
86°F	1 hour
104°F	30 minutes

Overcoating Guidelines

The coating can be overcoated once it becomes touch dry, typically after 4 hours at 68°F. However, overcoating must be completed within 48 hours.

If this timeframe is exceeded, the coating must be fully cured before proceeding. In such cases, the surface should be abraded or flash blasted to remove any contamination and ensure proper adhesion.

Pack Sizes

This product is available in the following pack sizes:

5LTR
20LTR

Mechanical Properties

Adhesion ASTM 3359 Mechanically Prepared SSPC-SP3 (ST3)	Mild Steel: Class 5B Aluminium: Class 5B Stainless Steel: Class 5B Copper: Class 5B
Adhesion ASTM 3359 Manually Prepared SSPC-SP2 (ST3)	Mild Steel: Class 5B Aluminium: Class 4B Stainless Steel: Class 4B Copper: Class 4B
Salt Fog Resistance ASTM B117	5,000 hours unaffected
Humidity Resistance ASTM BS3900	5,000 hours unaffected
Scratch Resistance ASTM BS3900	No failure 2.5KG Load
Heat Resistance Maximum Intermittent Wet Temperature Resistance	302°F
Heat Resistance Maximum Dry Heat Resistance	356°F

Approvals

Food Contact USDA compliant for incidental food contact

Title 21, Food & Drugs, Chapter 1, U.S. Code of Federal Regulations, FDA Subchapter B – Food for Human Consumption, Section 175.300 (Resinous & Polymeric Coatings).

Technical Service

Complete technical assistance is available. Please contact Thortex America, INC with your requirements:
1-610-831-0222 I kclarke@thortex.com

The products that we supply are for professional use only, it is your responsibility to read the technical data sheets before you place an order and prior to application of the product

Quality

All THORTEX AMERICA, INC. products are manufactured and supplied in accordance with an ISO 9001 registered Quality Management System.

Warranty

All THORTEX AMERICA, INC warrants that the performance of the supplied product will conform to the typical descriptions provided in the Technical Data Sheet.

Health & Safety

Please ensure good practices are followed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn. Before mixing and applying the material, please ensure you have read and fully understood all relevant information.

Legal Notice

The data provided in this Product Technical Data Sheet is for informational purposes only and is believed to be accurate at the time of issuance. However, we cannot assume responsibility for results obtained by others whose methods are beyond our control. It is the customer's responsibility to assess the suitability of the product for their intended use. THORTEX AMERICA, INC accepts no liability arising from the use of this information or the product described herein.