EUCLID CHEMICAL

DURALKOTE 240 Neat Application

DURALKOTE 240 is a two-component, 100% solids, high performance epoxy coating system designed for use on concrete floors and walls. DURALKOTE 240 is flexible, offers exceptional chemical and abrasion resistance, and provides excellent adhesion to properly prepared surfaces. DURALKOTE 240 produces a glossy, tile-like, easily maintained surface. DURALKOTE 240 is available in Light Gray and a Neutral Base, that can be colored with EUCLID UNIVERSAL COLOR PACKS; available in 33 standard colors.

Coating Neat (no aggregate fortification): 22 to 32 mils dry film thickness

Step 1 Primer: *DURAPRIME WB applied as a primer per manufacturer's literature.*

Step 2 First Coat : *DURALKOTE 240 applied at full coverage. Two coats are typically used for industrial applications and areas expected to receive high wear.*

Step 3 Second Coat: *DURALKOTE 240 applied at full coverage*

Step 4 Top Coat (Optional): *In areas subject to sunlight or high intensity artificial light color stability can be improved by applying a seal coat of one of Euclid Chemical's high quality urethane coatings in a color to match the base coat.*

Note: The paragraphs below are meant to be incorporated into Parts 2 and 3 of a standard CSI 3 Part Format specification, the General Structural Notes, or directly onto the plans. They must be carefully reviewed by a qualified design professional and edited to meet the requirements of the project and governing building codes. Coordinate with other specification sections and drawings. In no case shall these Guide Specifications be considered to be Contract Documents or serve as installation instructions for the product being discussed. In any cases of discrepancy the manufacturer's most recently published data sheet shall take precedent.

PART 1 GENERAL

{Note to Specifier: Insert the following paragraph and sub paragraphs as required for your project. Euclid's recommended products are shown in italics. More info can be found on these products at www.euclidchemical.com or by clicking on the product links.}

1.01 RELATED WORK:

A. Joint Fillers – Eucolastic, Tammsflex, Dural 340, Qwikjoint UVR
B. Concrete Repair:
   1. Vertical and Overhead: Euco V-100, Tamms Structural Mortar
   2. Horizontal: Express Repair, VersaSpeed
   3. Form and Pour: Eucocrete
C. Crack Repair/Injection: Dural 452 LV, Dural Fast Set Epoxy Gel
D. Bonding Agents: Duralprep A.C., Dural 452 MV
E. Waterproofing/Dampproofing : Tamoseal, Vandex Super, Hey'Di K-11, Vandex BB75
F. Architectural Coatings: Tammscoat, Tammolastic
G. Anti-Graffiti Coatings: AG 100, AG-400,
H. Traffic Deck Coatings: Tammsdeck, Flexdeck
I. Decorative Floor Coatings: Duraltex

J. Epoxy Chemical Resistant Coatings: Duralkote 240, Duralkote 500, Duraltex 1705/07, Duraltex 1805/07
K. Penetrating Water Repellents:
   1. Horizontal and Vertical: Baracade WB 244, Baracade 100C, Baracade Silane 40 IPA
   2. Vertical: Chemstop WB Regular/Heavy Duty
L. Penetrating Epoxy Sealer: Euco #512 VOX Epoxy Sealer
M. Cathodic Protection: Sentinel Galvanic Anodes
N. Moisture Mitigation System: Dural AquaTight WB

1.02 QUALITY ASSURANCE

A. Obtain primary resinous coating materials, including primers, base coats, seal coats and top coats etc… from one single resinous coating manufacturer. Obtain secondary materials including aggregates, sheet flashings, joint sealants, and substrate repair materials of type and from source recommended by resinous coating manufacturer.

   1. Resinous coating manufacturer shall have ISO 9001 Quality Certification.

B. Resinous Coating Mock-Up:

   1. Prior to commencing resinous coating application, prepare a minimum **<<insert size>>** full scale, reference mock-up of each type, **[and][color][and][texture]** of resinous coating surface for approval by Owner. Said reference mock-up shall be constructed in location designated by owner/architect, using the same equipment, tools, personnel and methods for installing all materials as will be used for the remaining work to be performed.
   2. Once accepted by owner or owner's representative, mock-up is to remain, and is to be protected from damage. It shall become the standard for acceptance of color and texture for resinous coating applications.
   3. When Architect determines that mockup does not meet requirements, demolish and remove it from the site and cast another until the mockup is accepted.

1.03 PROJECT CONDITIONS

A. Environmental Limitations: Apply resinous coating within the range of ambient and substrate temperatures recommended in writing by manufacturer. Do not apply resinous coating to damp or wet substrates. Apply when temperatures are between 50 deg F and 90 deg F (10 deg C and 32 deg C). Do not apply when relative humidity exceeds 70 percent, or when temperatures are less than 5 deg F (-15 deg C) above dew point.

   1. Coordinate coating work with other trades to ensure adequate illumination, ventilation, and dust free environment during application and curing of coating.

B. Conditions for Concrete

{Note to Specifier: New concrete slabs on grade to receive resinous coating should be poured over heavy duty, uninterrupted, properly installed, vapor barrier.}

{Note to Specifier: : Moisture retaining cover cure is to be removed after seven days to allow the concrete to air dry prior to coating installation.}

   1. New concrete shall be in place a minimum 28 days before proceeding.
   2. Any cementitious repair mortars must have a full 7-day cure prior to coating unless otherwise approved in writing by architect.

3. Do not apply resinous coatings if there is excessive moisture in the concrete or if the moisture vapor emission rate (MVER) is high.

    a. Prior to application of resinous coating, perform either of these tests: ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probes, or ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. If the relative humidity is 70% or greater, or the MVER is 3 lbs/1000 ft2 /24 hrs or greater notify Architect in writing and contact manufacturer for recommendations.

4. Examination:

    a. Prior to commencement of resinous system application examine substrates, with Applicator present, for compliance with requirements and for other conditions affecting performance of resinous coating.
    b. For the record, prepare written report, endorsed by Applicator, listing conditions detrimental to performance.
    c. Verify compatibility with and suitability of substrates.
    d. Contractor must report, in writing, surfaces left in improper condition by other trades. Application of coating indicates acceptance of surfaces and conditions.

PART 2.0 PRODUCTS

2.01 RESINOUS COATING SYSTEM

A. Prime Coat: (2) component, clear, penetrating water-based epoxy primer with the following characteristics:

1. Mixed Viscosity: 1,500 to 3,500 cps @ 75 deg F.
2. Solids Content of 32%
3. Product:

    a. Euclid Chemical Company (The); Duraprime WB, www.euclidchemical.com

B. System Base Coat: (2) component, 100% solids, high build, flexible epoxy coating resin with the following characteristics:

1. Shore D Hardness of 75 to 85 per ASTM D 2240
2. Tensile Strength 1,800 to 2,000 psi per ASTM D 638
3. Tensile Elongation 15% to 25% at break per ASTM D638
4. Mixed Viscosity: 3,000 to 5,000 cps @ 75 deg F.
5. Product:

    a. Euclid Chemical Company (The); DuralKote 240, www.euclidchemical.com
    b. Color: **[To be chosen from manufactures list of standard colors]**

{Note to Specifier: The paragraph below discusses the resinous coating system top coat. In areas subject to sunlight or high intensity artificial light color stability can be improved by applying a top coat of one of Euclid Chemical's high quality aliphatic urethane coatings in a color to match the base coat.

[B. Resinous Coating System Top Coat: Utilize urethane coating recommended by resinous coating system base coat manufacturer.]

{Note to Specifier: Often minor surface repairs are required prior to application of the resinous coating system. Such repairs can typically be handled by having the contractor make a mortar mix of the 100% solids coating resin and aggregate. Larger repairs can be performed utilizing DuralFlex Fast Patch 100% solids fast setting epoxy repair mortar or VersaSpeed fast setting cementitious repair mortar designed to take Euclid epoxy coatings in 4 hours.}

PART 3.0 EXECUTION

3.01 SURFACE PREPARATION

A. Clean and mechanically prepare substrates according to manufacturer's written recommendations to produce clean, sound, dust-free, dry, absorptive substrate free of grease, oils, curing compounds, surface laitance, soil and other contaminants which may interfere with bond of resinous coating. Surface profile should be equal to CSP 2 to 4 in accordance with ICRI Guideline 310.2. Steel surfaces should be blasted in accordance with SSPC-SP10 to a "NEAR WHITE" finish using clean dry blasting media.

Note to specifier: The strength of the prepared concrete surface can be tested. Insert the following sub paragraphs if quantitative results are required.

1. [Following surface preparation the cleaned concrete shall be tested for compliance with the following:]

a. [Minimum surface tensile strength of 250 psi when tested with a "Elcometer" or similar pull tester per ASTM C 1583.]

2. Begin resinous coating application only after minimum concrete curing and drying period recommended by resinous coating manufacturer has passed, after unsatisfactory conditions have been corrected, and after surfaces are dry

B. Prepare vertical and horizontal surfaces at terminations and penetrations through resinous coating and at expansion joints, drains, and sleeves according to manufacturer's written recommendations

C. Mask adjoining surfaces not receiving resinous coating, drains, and other substrate penetrations to prevent spillage, leaking, and migration of coatings.

{Note to Specifier: Retain the following paragraph if a seamless coating system is desired. It should be noted that on newly poured concrete slabs, and on concrete surfaces that will be undergoing dramatic temperature swings, there may be significant movement taking place at the control joints. Such movement may not be able to be accommodated by the epoxy coating system. This can result in cracking through the resinous coating. Another option is to have control joints and dynamically moving cracks brought up through the coating and sealed with an elastomeric joint sealant such as Eucolastic in a matching color. }

[D. Static Cracks and Non-Moving Joints shall be routed to a minimum with of ¼" and a minimum depth of ½" and filled with a semi-rigid epoxy joint filler approved by resinous coating manufacture or a detail coat of specified resinous coating.]

3.02 RESINOUS SYSTEM APPLICATION:

A. Resinous System Neat Application

1. Mechanical Mixing- Coating and primers shall be thoroughly mixed utilizing a mechanical drill with a manufacturer approved mixing blade. Premix individual components separately per manufacturer's recommendations then combine materials and mix per manufacturers recommendations. Bottom and sides of container may be scraped during mixing but shall not be scraped once mixing has ceased. Do not aerate material.
2. Primer Coat Application: Roller apply properly mixed Prime Coat material at manufacturer's recommended coverage rate of 125 to 250 square feet per gallon.
3. Resinous System Base Coat Application: Once prime coat is tack free, but no later than 24 hours after application of prime coat, apply uniform application of properly mixed Resinous System Base Coat to at a rate of 100 to 150 square feet per gallon per manufacturer's written recommendations. Allow 5 to 8 hours but no more than 24 hours before applying additional coats. **[Repeat for second coat.]**

{Note to Specifier: The paragraph below discusses the resinous system top coat. In areas subject to sunlight or high intensity artificial light color stability can be improved by applying a seal coat of one of Euclid Chemical's high quality urethane coatings in a color to match the base coat.

[4. Resinous Coating System Top Coat Application: Apply uniform application of properly mixed resinous coating system top coat per manufacturer's written recommendations at manufacturer's recommended coverage rate. Apply to tack free surface no more than 24 hours after application of previous coat.]

{Note to Specifier: To provide a seamless integral coating at the floor to wall transition, a cove base of 2 to 6 inches (5 to 15 cm) in height may be required. The base coat resin mixed with aggregate can be used as a cove base. Retain paragraph below to provide cove base.}

[B. Cove Base shall consist of mixture of base coat resin and finely graded, clean dry, trowelable aggregates troweled to properly prepared vertical surface to a height of <<insert number>> in order to create coved, seamless, integral transition at joint between wall and floor.]

{Note to Specifier: Depending on the specific project, correct implementation of other application details, such as terminations, /drain detail, etc. may be required. For further information contact Euclid Chemical Technical Support at (800) 321-7628.}

3.03 CURING AND PROTECTING

A. Prevent contamination and damage during application and curing stages.

B. Protect resinous coating from damage and wear during remainder of construction period.

END SECTION