EUCLID CHEMICAL

DURALKOTE 500

100% solids, solvent free, low odor, environmentally friendly, epoxy coating liner system. It is impervious to a wide variety of acids, caustic solutions, oils, grease and many other chemicals. DURALKOTE 500 is particularly resistant to sulfuric acid up to a concentration of 75%. No special precautions are necessary to contain odors or solvents often found in many other liner systems. Because of its low odor and environmentally friendly nature, it is ideal for use as a protection system in the wastewater and chemical industries.

{Note to Specifier: The paragraphs below are meant to be incorporated into Parts 2 and 3 of a standard CSI 3 Part Format specification, project's General Structural Notes or directly onto the plans. They must be carefully reviewed by a qualified design professional and edited to meet the particular requirements of the project at hand, assure compliance with any governing building codes, and 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

1.02 QUALITY ASSURANCE

A. Obtain primary resinous epoxy coating liner materials, including primers, from resinous coating manufacturer. Obtain secondary materials including aggregates, sheet flashings, joint sealants, and substrate repair materials of type and from source recommended by resinous epoxy coating liner manufacturer.
   1. Resinous epoxy coating liner manufacturer shall have ISO 9001 Quality Certification.

B. Resinous Liner Mock-Up:
   1. Prior to commencing resinous liner application, prepare a minimum **<<insert size>>** full scale, reference mock-up of each type, **[and][color][and][texture]** of resinous liner surface for approval by Owner. Said reference mock-up shall be constructed in location designated by owner/architect, using the same equipment, tools 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 flooring 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 liner within the range of ambient and substrate temperatures recommended in writing by manufacturer. Do not apply resinous epoxy coating to wet substrates, when temperatures are below 50 deg F (5 deg C),
   1. Coordinate work with other trades to ensure adequate illumination, ventilation, and dust free environment during application and curing of epoxy coating liner system.

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 cured a minimum of 7 days, and in place a minimum 28 days before proceeding.
   2. Any cementitious repair mortars must have a full 7-day cure prior to coating.
   3. Examination:
      a) Prior to commencement of resinous epoxy coating liner 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 PRODUCT

2.01 RESINOUS LINER SYSTEM

{Note to Specifier: All of the material properties shown in the sub paragraphs below are not typically applicable on every project. They are listed here in order to allow the design professional to review and edit the information according to the particular project parameters for which the product will be used.}

A. High Build Epoxy Liner System: (2) component, 100% solids, epoxy liner resin resistant to sulfuric acid at concentration levels up to 75%. Material shall exhibit the following properties:
1. Compressive Strength of 8,500 psi per ASTM D 695
2. Flexural Strength of 5,000 psi at 7 days per ASTM D 790
3. Max. VOC Content: 0 g/l
4. Shore D Hardness of 88 per per ASTM D 2240
5. Tensile Strength 4,000 psi per ASTM D 638
6. Tensile Elongation 3% to 6% per ASTM D 638
7. Bond to Damp Concrete: per ASTM D 4541 7 days “Concrete Failure”
8. Product:
   a) Euclid Chemical Company (The); DURALKOTE 500, www.euclidchemical.com
   b) Color: **[Light Gray][White]**

{Note to Specifier: Often minor surface repairs are required prior to application of the resinous epoxy coating liner 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 on horizontal surfaces or EucoRepair V100 on vertical surfaces.}

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 and other contaminants which may interfere with bond of resinous epoxy coating liner system. Surface profile should be equal to CSP 2 to 5 in accordance with ICRI Guideline 310.2. Steel surfaces should be blasted in accordance with SSPC-SP10 or NACE #2 to a “NEAR WHITE” using clean dry blasting media.

{Note to specifier: The strength of the prepared concrete surface can be tested. Insert the following sub paragraph 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 C1583.]**

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

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

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

3.02 RESINOUS LINER SYSTEM APPLICATION:

A. Resinous Epoxy Coating Liner System Neat Application:

1. Mechanical Mixing- Coating and primers shall be thoroughly mixed with 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. Resinous Liner System Application: Apply uniform application of properly mixed resinous liner resin per manufacturer's written recommendations at coverage rates required to achieve 100 mils dry film thickness.

{Note to Specifier: Depending on the specific project, correct implementation of other application details, such as floor terminations, floor/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 epoxy coating lining system from damage and wear during remainder of construction period.

END OF SECTION