



TECHNICAL DATA SHEET

DURAL® 306

Epoxy Coal Tar Overlay and Waterproofing Membrane

03920

CONCRETE RESURFACING
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TAMMS INDUSTRIES
MARCH 2002 (Replaces 1/00)

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- DESCRIPTION:** DURAL 306 is a coal tar modified, 100% solids flexible epoxy resin system used as a waterproofing membrane for concrete and steel bridge decks, and to create a nonskid surface when used with aggregate.
- USES:** DURAL 306 is used as a waterproofing membrane on concrete and steel bridge decks prior to applications of asphalt concrete. DURAL 306 is also used to create a nonskid overlay on bridge decks, roadways, parking garages, and floors, when combined with aggregate. It is used as an epoxy mortar for patching and expansion dam header rehabilitation when mixed with kiln dried silica sand. DURAL 306, when used as an adhesive, bonds traffic dividers and markers, and metal expansion joints.
- COMPOSITION AND MATERIAL:** DURAL 306 is a two component, coal tar modified, 100 percent solids, epoxy resin compound.
- COMPLIANCE:** N.Y.S.D.O.T. specifications for item 717.02. [Formerly M-30-B].
- SURFACE PREPARATION:** Concrete must be structurally sound, dry, free of grease, oils, coatings, dust, curing compounds and other contaminants. Surface laitance must be removed. The preferred method of surface preparation is abrasive blasting or shotblasting. Remove oil, grease smear and asphalt residue with trisodium phosphate or a strong detergent. For oil contaminated surfaces steam cleaning in conjunction with a strong emulsifying detergent may be considered. Rinse thoroughly with potable water. After cleaning, remove defective concrete, honeycombs, cavities, joint cracks, voids and other defects by routing to sound material. Smooth, precast and formed concrete surfaces must be cleaned, roughened and made absorptive by abrasive blasting or shotblasting. If it is not possible to sandblast or shotblast, acid etch with a 15% Hydrochloric acid solution. Follow by pressure washing or flushing the surface with copious amounts of water to neutralize the surface. Care must be taken to ensure that all salts and residue from the reaction have been removed. The pH of the surface should be checked as per ASTM D4262 following acid etching. Following surface preparation, the cleaned surface must have a minimum surface tensile strength of 250 psi when tested with a pull tester or an elcometer (ASTM D4541). Before application of the coating, use the "Visqueen test" (ASTM D4263) to evaluate moisture level in concrete. New concrete should be allowed to cure for a minimum of 28 days before applying DURAL 306. Consult TAMMS Technical Service if earlier times are required. For larger patches, cementitious patching materials may be used. Consult TAMMS Technical Service for appropriate patching materials. **STEEL:** Remove all oils, grease, dirt, old coatings and other chemical contaminants. Steel surfaces should be blasted in accordance with SSPC-SP10 or NACE#2 to a gray metal finish using clean dry blasting media.

PROPERTIES AT 75° F (23.9° C)

Color:	
Part A	Amber
Part B	Black
Mixing Ratio	1:1 volume
Gel Time	15-25 minutes
Initial Cure	3-4 hours
Final Cure	5-7 days
Mixed Viscosity	4000±1500 cps
Compressive Strength, psi	4500
ASTM C109, 3 parts sand	
Shore D Hardness, 7 days	70-80
ASTM D2240	
Tensile Strength	800-1100 psi
ASTM D638	
Tensile Elongation	50±10 percent
ASTM D638	
Water Absorption	
ASTM D570, 24 hours	0.24%

Values are typical and not necessarily referenced to create specifications.

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7. **APPLICATION TECHNIQUES:** Temperature of surface and air must be above 50°F and rising. For small installations, spread the mixed DURAL 306 onto the surface with a stiff broom or a squeegee. Larger installations may require the use of special two component mixing and spraying equipment. Use aggregate with minimum 90 percent Mohs' hardness 7, with 100 percent passing #8 sieve, and maximum 3 percent passing #30 sieve. For best results, use basalt, emery grit, aluminum oxide, or garnet. Recommended grit sizes are #14 to #36, or #12 to #30.

- **Waterproofing:** For waterproofing under bituminous concrete, apply DURAL 306 at 50-60 square feet per gallon (1.2 sq.m/l) for a coating approximately 25 mils thick. Immediately after material has set, usually 3 to 4 hours, depending upon temperature, apply the second coat at 30 square feet per gallon (0.7 sq.m/l), and immediately lightly broadcast aggregate before the second coat sets.
- **Surface Sealing and Skidproofing:** Prime surface with DURAL 306 at 50 square feet per gallon (1.2 sq.m/l), and follow immediately with a light broadcast of aggregate. Then, apply DURAL 306 at 30 square feet per gallon (0.7 sq.m/l), and follow immediately with aggregate at 6 pounds per square yard (3.2 kg/sq.m).
- **Joints and Cracks:** Seal non-moving joints or cracks by pouring DURAL 306 into crack as necessary.

8. **CLEAN-UP INSTRUCTIONS :** Clean tools and application equipment immediately after use with xylene or aromatic 100 solvent. Clean spills or drips while still wet with solvent. Dried DURAL 306 will require mechanical abrasion for removal.

9. **CAUTIONS:** Do not aerate DURAL 306 materials during mixing.

Do not mix or apply DURAL 306 unless ambient and surface temperature is at least 40°F (4.4°C) and rising. Multiple applications of DURAL 306 must begin within 24 hours of the preceding application. Provide adequate ventilation when applying indoors or confined spaces.

10.ENVIRONMENTAL/SAFETY PRECAUTIONS:

Industrial Use Only. Component "A": Contains epoxy resin. Vapors can cause skin or eye irritation. Can cause sensitization after prolonged or repeated exposure. Use of safety goggles and chemical resistant gloves is recommended. Use only with adequate ventilation. **Component "B":** Is **CORROSIVE** and contains a suspected carcinogen. Contains amines and coal tar. Contact with eyes or skin may cause severe burns. Can cause sensitization after prolonged or repeated use. Use of safety goggles and chemical resistant gloves is highly recommended. Use only with adequate ventilation.

First Aid: In case of skin contact, wash immediately and thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. Consult physician immediately. For respiratory problems, remove person to fresh air. Disposal: Collect with absorbent material. Dispose of in accordance with current local, state and federal regulations. **READ MATERIAL SAFETY DATA SHEET BEFORE USING. FOR INDUSTRIAL USE ONLY KEEP AWAY FROM CHILDREN AND ANIMALS. EMERGENCY RESPONSE: 1-800-862-2667 (TAMMS) 1-800-424-9300 (CHEMTREC).**

11.**TECHNICAL SERVICE:** For application procedures or surface conditions not specified above, please contact:

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