TECHNICAL DATA SHEET

DURAL® 356

Water Based Epoxy Coating

1. **DESCRIPTION:** DURAL 356 is a two component, water based epoxy coating. DURAL 356 exhibits performance characteristics comparable to solvent based epoxy coatings, but has the advantages of easy water cleanup and of being noncombustible. DURAL 356 has low VOC, and offers good chemical resistance against mild corrosive and chemical environments. DURAL 356 has good abrasion resistance, overnight recoat, and can be used on damp concrete surfaces.

2. **USES**: DURAL 356 is used to cure, seal and coat concrete, masonry, and brick. It can be used on floors or walls. Due to its low odor, non-flammability and ease of handling, it is used in schools, laboratories, clean rooms, process areas, hospital rooms, etc. DURAL 356 is also used as a protective coating for bridge abutments, median barrier walls and similar applications.

3. **COMPOSITION AND MATERIALS**: DURAL 356 is a two component, water based epoxy sealer and coating that has the following properties:

MATERIAL PROPERTIES
75°F @ 50% Relative Humidity

Mix Ratio (A:B, by volume)	1:2
Mixed Viscosity, cps	3-6000
Pot Life, (3 gal. unit), hrs.	2-4
Dry to Touch, hrs.	6-8
Set to Touch, hrs.	12-18
Final Cure, days	7
Mixed Solids -pigmented, % wt.	55-60
-clear, % wt.	48-52
VOC (Mixed), lbs./gal	1.50
Hardness, pencil	F-H
Bond Strength	exceeds strength of concrete
Chloride Permeability AASHTO T277	negligible – 74 coulombs
Abrasion Resistance, mgs. wt., loss	100
(Tabor Abraser, 1000 revs, cs 17, 1000 gms.wt.)	
ASTM C309 - curing, wt. loss	0.36 kg/m^2

Values presented are typical and not necessarily referenced to create specifications.

4. **COLORS:** DURAL 356 is available in light gray, dark gray, tile red and clear. Special colors or custom colors are available in minimum order quantities. Contact TAMMS Customer Service for more information.

5. **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. Rinse thoroughly with potable water. After cleaning, remove defective concrete, honeycombs, cavities, joint crack 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. After etching, pressure wash or flush 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 should pull concrete when tested with a pull tester or an elcometer (ASTM D4541).

6. **MIXING INSTRUCTIONS:** Mix Component A and Component B separately. Using a clean container, combine one part by volume part A (Base) with two parts by volume part B (Hardener). Mix thoroughly with a slow speed motor and a Jiffy type mixer. Scrape the bottom and sides of the container during mixing. Allow to induct (age) for 20 minutes at 75°F. (longer at cooler temperatures) and then remix before applying the material. Do not aerate the mix.

7. **APPLICATION INSTRUCTIONS:** A primer is strongly recommended, especially when DURAL 356 is used on concrete floors or on highly porous concrete. A prime coat of Duraprime 50, a water based epoxy primer, should be applied 150-250 sq.ft./gal. by roller, squeegee, brush, or spray. This penetrating primer gives excellent hold out properties. DURAL 356 may be applied as soon as the primer is tack free but within 24 hours. Ambient temperature for application of DURAL 356 should be between 50-90°F with humidity below 80%. Apply the properly mixed DURAL 356 by brush, squeegee, short nap roller, or spray at 7-10 wet mils (160-225 sq.ft./gal). A second coat should be applied after 10-18 hrs. (@ 75°F) but within 36 hrs, at a coverage rate of 200-250 sq.ft./gal. Where anti-skid properties are needed, broadcast aggregate after the first coat, allow to cure, sweep off excess and apply second coat. Depending on ambient conditions, temperature /humidity, the surface can be put back in service in 3-7 days. Increasing air flow helps the coating dry in adverse conditions.

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HIGH-PERFORMANCE COATINGS
FINISHES
09960

8. **COVERAGE:**

Duraprime 50	150-250 sq.ft./gal
Dural 356	160-225 sq.ft./gal
2nd coat	200-250 sq.ft./gal

Coverage will vary depending on surface texture, porosity and temperature.

9. **PACKAGING:** 3 and 15 gallon units.
Storage: 50-90°F. Protect from freezing.
Shelf Life: 1 year in original sealed containers, in protected storage.

10. **CLEANUP INSTRUCTIONS:** Clean tools and application equipment immediately after use with water. Clean spills or drips, while still wet, with water. Dried DURAL 356 will require mechanical abrasion for removal.

11. **CAUTIONS**: Cure concrete 28 days before application. Do not apply DURAL 356 at temperatures below 50°F or under high humidity (>80%). DURAL 356 applied at higher film thickness (>10 wet mils) may cause blistering due to water entrapment. Do not apply to frozen or frost filled substrates. Protect DURAL 356 from freezing. Not intended for areas subject to prolonged or strong chemical attack. Color variations may occur after extended UV exposure. Recoat only after previous coat is completely tack free (typically 10-18 hours). Recoat must be done within 36 hours.

12. **ENVIRONMENTAL AND SAFETY PRECAUTIONS: Industrial Use Only.**
Component "A'': Contains epoxy resin. Vapors can cause respiratory irritation. Contact may cause skin and 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'': Irritant. Contains solvents and amines which may cause moderate skin or eye injury. Safety goggles and neoprene gloves are 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:
1-800-424-9300 (CHEMTREC)
1-800-862-2667 (TAMMS)

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

TAMMS INDUSTRIES
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Kirkland, IL 60146
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