



TECHNICAL DATA SHEET

DURAL® 304

INDUSTRIAL MAINTENANCE COATING

09960

HIGH-PERFORMANCE COATINGS FINISHES

- DESCRIPTION:** DURAL 304 is a two component solvent based high solids epoxy coating which provides good chemical resistance and excellent wear resistance. DURAL 304 should be used as a coating for concrete and steel where both aesthetics and performance are desired. DURAL 304 can be used on walls and floors and will withstand foot and rubber tired vehicular traffic.
- USES:** DURAL 304 is used on exterior or interior surfaces. Typical applications include production assembly areas, showrooms, steel or concrete tanks, steel equipment etc. DURAL 304 can be used on floors and walls in sewage treatment plants, clean rooms, warehouses, locker rooms, auto/truck bays, breweries and poultry processing areas.
- COMPOSITION AND MATERIALS:** DURAL 304 is a two part, solvent based high solids epoxy coating.

MATERIAL PROPERTIES 75°F @ 50% RH	
	<u>Dural 304</u>
Mix ratio (A:B by vol.)	1:1
Mixed viscosity, cps	5000-8000
Mixed solids % by wt.	65
Pot life, hrs for a 2 gal unit	4-6
Tack free time, hrs	2-4
Final cure, days	7
Flexibility 1/8" Mandrel test	passes
Values presented are typical and not necessarily referenced to create specifications.	

- COLORS:** DURAL 304 is available in Light Gray, Dark Gray, Tile Red and unpigmented (amber). Special and custom colors are available and are subject to minimum quantity orders.
- COMPLIANCE:** DURAL 304 meets USDA requirements.
- 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. For oil contaminated surfaces using 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 abrasiveblast 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 per ASTM D4262 following acid etching. To confirm that the surface preparation is adequate, there must be concrete failure in the surface when tested with an Elcometer or similar pull tester (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. (Consult TAMMS Technical Service if earlier times are required.). Remove any surface hardener or curing compounds, by using the recommended mechanical methods for surface preparation. Prepare surface as recommended above.

Old Concrete: For quick, small patching use suitable epoxy mortar. For larger areas use cementitious patching materials which are compatible with the system. After patching, a light brush blast is recommended prior to coating. (Consult TAMMS Technical Service for appropriate patching materials).

Steel: All oils, greases, dirt, old coating or chemical contaminants must be removed. All welds should be continuous and ground to remove all splatter, sharp edges, laps and other surface irregularities. For Intermittent Contact/ Atmospheric Service, all steel surfaces should be blasted to a "NEAR WHITE" metal finish using clean dry blasting media.

- MIXING INSTRUCTIONS:** Premix the individual components Part A and Part B separately. Combine equal parts by volume of Part A (Base) and Part B (Hardener) in a clean container. Mix thoroughly with a slow speed motor using a "Jiffy" mixer for a minimum of 3 minutes. Scrape the sides and bottom of the container during mixing. Do not aerate mix. Do not thin mix. Allow mix to age (induct) for 30-40 minutes at 75°F and remix before applying material.
- APPLICATION TECHNIQUES:** The ambient and surface temperature should be between 50-90°F. DURAL 304 can be applied using a short nap roller, brush, or an airless spray. DURAL 304 dries quickly, hence roll out brush marks or sags soon after application. If an anti-skid surface is required broadcast a fine, clean, dry silica aggregate at a rate of 0.2-0.8

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lbs./sq.yd. within the tack free time of DURAL 304 to achieve the desired surface. A second coat or a seal coat should be applied within 24 hours, at 75°F. Allow the coating to cure 48 hours (at 75°F) prior to opening to light traffic.

9. **COVERAGE:** Coverage rates are approximate and for estimating purposes only. Surface porosity, texture and temperatures will determine actual material requirements.

Product	Coverage sq.ft./gal
Dural 304	200-300
2nd coat	250-400

10. **CLEAN-UP INSTRUCTIONS:** Clean tools and equipment immediately after use with Xylene, or Aromatic 100. Clean up spills or drips while still wet with the same solvents. Dried product will require mechanical abrasion for removal.

11. **PACKAGING:** 4 gallon cases and 10 gallon units.

Storage: 50 to 90°F.

Shelf life: 2 years in original sealed containers, in protected storage.

12. **CAUTIONS:** Do not apply below 50°F or at relative humidity greater than 90%. Heavy application on dense surfaces will cause longer dry times and the possibility of soft films. Apply on concrete cured for at least 28 days. Products are **FLAMMABLE**, use with adequate ventilation, proper protection and safety. Inadequate induction time after mixing (30 mins. recommended) may cause poor surface appearance. DURAL 304 is not recommended for aggressive environments requiring high chemical and abrasion resistance.

13. **ENVIRONMENTAL SAFETY: Industrial Use Only.**

Part A: Contains epoxy resin and solvents. **FLAMMABLE;** Irritant; Inhalation of solvent vapors can be irritating to the eyes, skin and may cause respiratory irritation. Avoid contact with eyes or skin. Chronic exposure to solvents has been associated with various neurotoxic effects including nervous system damage. Use of impermeable gloves, safety goggles and respirator is recommended. Use with adequate ventilation.

Part B: Contains amines and solvents. **FLAMMABLE; CORROSIVE;** Sensitizer. Contact with eyes or skin may cause severe burns. Can cause sensitization after prolonged or repeated use. Chronic exposure to solvents is associated with various neurotoxic effects. Avoid inhalation, skin or eye contact. Use of safety goggles, impermeable gloves and respirator is recommended. Use with adequate ventilation.

KEEP AWAY FROM CHILDREN AND ANIMALS.

First Aid: In case of skin contact, wash immediately with water and soap. For eye contact, flush immediately with plenty of water for at least 15 minutes and consult physician immediately. For respiratory problems, move person to fresh air and seek medical attention if needed.

Disposal: Collect with absorbent material. Dispose of in accordance with local, state and federal regulations.

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

TAMMS INDUSTRIES
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www.tamms.com

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DURAL 304 Chemical Resistance Chart

<u>ACIDS</u>	<u>RATING</u>	<u>ALKALIES/SALTS</u>	<u>RATING</u>
Acetic Acid 5%	1	Ammonia 29%	3
Citric Acid 5%	2	Potassium Hydroxide 50%	3
Hydrochloric 5%	2	Sodium Hydroxide 50%	3
Nitric Acid 5%	2	Detergent Solution	3
Phosphoric 10%	2	Ammonium Sulfate 50%	3
Sulfuric 10%	2	Sodium Chloride 50%	3
SOLVENTS		Ferric Chloride 50%	2D
Ethyl Alcohol 95%	1	Sodium Hypochlorite 5%	2D
Ethyl Acetate	NR	MISCELLANEOUS	
Methanol	1	Brake Fluid	2
Methyl Ethyl Ketone	NR	Skydrol	2
Mineral Spirits	3	Ethylene Glycol	3
Methylene Chloride	NR	Propylene Glycol	3
Toluene	2	Vegetable Oil	3
Xylene	2	Gasoline	3
Trichlorethane	2	Urine	3
Isopropyl Alcohol	1	Bleach Solution	3
		Diesel Oil	3

I = Incidental Contacts (8 hrs) 2 = Splash & Spill (72 hrs)
3 = Extended Exposure (7 days)
D = Discoloration may occur NR = Not Resistant
(All films cast at 4.0 mils. Dry film thickness on primed surface.)