



TECHNICAL DATA SHEET

DURAL® 1004C

Concrete and Metal Protective Coating

09960

HIGH-PERFORMANCE COATINGS FINISHES

- DESCRIPTION:** DURAL 1004C is a two component solvent based aliphatic polyurethane coating which offers outstanding abrasion resistance, excellent flexibility, color stability and weather resistant characteristics. It offers very good chemical resistance without compromising on aesthetics and is also ideal as a topcoat for most Tamms/Dural epoxy, urethane coatings and some masonry coatings. DURAL 1004C is VOC compliant.
- USES:** DURAL 1004C is a premium performance coating used on airport hanger floors and on walls and floors in manufacturing plants, warehouses, truck/auto repair bays. The cleanability and good chemical resistance makes it effective in clean rooms, laboratories and as an anti graffiti coating on bridge structures and concrete walls.
- COMPOSITION AND MATERIALS:** DURAL 1004C is a two component solvent based polyester aliphatic urethane coating.

water after scrubbing. Honeycombs, cracks, cavities, and other defects should be routed to sound concrete and patched using compatible materials. Smooth pre-cast and formed concrete must be cleaned and made absorptive by abrasive blasting.

Steel: Should be abrasive-blasted using clean dry aggregate to near white metal finish and primed immediately to prevent flash rusting.

New/Existing Coatings: Old or existing epoxy coatings should be cleaned and lightly sanded prior to application of DURAL 1004C as a topcoat. Follow the recommended drying time between coats, when applying DURAL 1004C to newly applied Dural epoxy coatings.

Priming: DURAL 1004C should not be applied directly to concrete. Dural 304 LV (two part solvent based epoxy) or Duraprime 50 (low odor, two part waterbased epoxy) should be used to prime concrete in accordance with the information provided in the technical data sheet for these products.

- MIXING INSTRUCTIONS:** Premix DURAL 1004C Part A and Part B separately, then combine one (1) part by volume of Part A with three (3) parts by volume of Part B in a clean dry container, and mix using a "Jiffy" or similar type mixer. Mix slowly without aerating for 3-5 minutes. Scrape the sides of the container and the blades at least once during the mixing. Do not aerate during mixing.

- APPLICATION TECHNIQUES: Primer for concrete:** Apply the selected primer using brush, short nap roller or spray. Refer to appropriate product data sheet. The primer must be tack free before application of DURAL 1004C.

DURAL 1004C: The surface and ambient temperature at the time of application should be between 50-90°F and the relative humidity below 90%. DURAL 1004C can be applied by roller, brush or spray as soon as the primer tacks off, but no later than 18 hours after application of the primer. When spraying, proper safety precautions should be observed. Two coats of DURAL 1004C are recommended for most applications. The second coat can be applied after the first coat has tacked off, typically within 2-4 hours after application at 75°F. For a matte finish, apply a coat of clear gloss to the primed surface, followed by a coat of clear matte. For an anti-skid surface, broadcast 1/2-1 pound/sq.yd. of clean, dry, fine aggregate into the first coat of DURAL 1004C. When the first coat has cured, sweep off the excess aggregate. Apply the second coat of DURAL 1004C to seal the surface.

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MATERIAL PROPERTIES @ 75°F - 50% RH

		DURAL 1004C
Mix ratio (A:B)	volume	1:3
Mixed viscosity, cps:	Clear	150-300
	Pigmented	1200-2000
Mixed solids	% by wt	58-62
Pot life	hours	4-6
Pencil Hardness		2H
Tack Free Time	hours	2-4
Final cure	days	7
Flexibility	1/8" Mandrel	passes
Taber Abrasion, CS17		
1,000 gms, 1,000 cycles	wt loss	50 mgs

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

- COLORS:** Light Gray, Dark Gray, Tile Red, White, Clear Gloss and Clear Matte are standard colors. Special or custom colors are available subject to minimum quantity orders.
- SURFACE PREPARATION: Concrete:** Surface must be structurally sound, dry, and free of laitance, dust, dirt, oil, coatings, form release agents, and other contaminants. Remove curing compounds by abrasive blasting. Oil, grease and asphalt residue should be removed by using a combination of scrapers, wire brushes, abrasive blasting and scrubbing with a strong industrial grade detergent. Flush thoroughly with clean

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8. **COVERAGE:** DURAL 1004C coverage rates are approximate and depend on temperature, porosity and texture of the surface.

(coverage rate sq.ft./gal.)

Concrete Primers

Dural 304 LV	150-300
Duraprime 50	200-400

Surface

DURAL 1004C

Primed concrete/masonry	300-450
Dural epoxy coated	450-550
Steel	450-550

9. **CURE TIME:** At 75°F, tack free time is 2-4 hrs. DURAL 1004C requires 48 hours at 75°F to cure sufficiently for light to moderate traffic.

10. **GRAFFITI REMOVAL:** Graffiti removal should not be attempted until 48-72 hours after DURAL 1004C application. Remove graffiti as soon as possible after the graffiti attack by working on small areas at a time. Use commercially available graffiti removers and apply in accordance with manufacturers instructions.

11. **CLEAN-UP INSTRUCTIONS:** Clean tools and application equipment immediately after use with Methyl Ethyl Ketone or PM Acetate. Clean spill or drips while still wet with solvents. Dried DURAL 1004C will require mechanical abrasion for removal.

12. **PACKAGING:** DURAL 1004C: 4 gallon cases and 20 gallon units.

Storage: 50-90°F. Keep away from heat and flame. Protect from moisture.

Shelf Life: 1 year in protected storage unopened containers.

13. **CAUTIONS:** Apply DURAL 1004C when surface and ambient temperatures are between 50-90°F and the humidity below 90%. Surfaces including primer must be dry prior to DURAL 1004C application. Excessively high film thicknesses and/or moisture may cause surface blistering. Concrete surfaces may darken to give a "wet look" effect on application. A test patch for application on concrete or existing coatings is highly recommended. Not intended for continuous immersion. Provide adequate ventilation and ensure proper protective and safety equipment during application. Keep away from sparks, open flame, pilot lights and other sources of ignition. Keep containers tightly closed.

14. **ENVIRONMENTAL AND SAFETY: Industrial Use Only. Part A:** Contains aliphatic isocyanates, solvents SENSITIZER, IRRITANT. Inhalation of isocyanate vapors or mist above TLV may cause severe respiratory tract irritation and bronchial spasms. Some individuals may develop temporary or permanent sensitization. Avoid skin or eye contact. Use of proper NIOSH respirator, eye goggles and protective gloves is required. Provide adequate ventilation.

Part B: Contains solvents and polyols, IRRITANT, **FLAMMABLE.** Overexposure to solvents is associated with various neurotoxic effects. Avoid skin/eye contact. Use of respirators and impermeable gloves is recommended. Use with adequate ventilation.

KEEP AWAY FROM CHILDREN AND ANIMALS. FIRST AID: For skin contact, wash affected area with soap and water. For eye contact, flush eyes with water for 15 minutes and see physician immediately. For respiratory problems, remove person to fresh air. For ingestion, do not induce vomiting. See physician.

DISPOSAL: Collect spills with absorbent material. Dispose of in accordance with local, state, or federal regulations.

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

TAMMS INDUSTRIES
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800-862-2667 FAX: 815-522-2323
www.tamms.com

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Chemical Resistance Chart

ACIDS	RATING	ALKALIES/SALTS	RATING
Acetic Acid 10%	2	Ammonia 29%	3
5%	3	Potassium Hydroxide 50%	3
Citric Acid 5%	3	Sodium Hydroxide 50%	3
Hydrochloric 10%	3	Detergent Solution	3
Nitric Acid 5%	3	Ammonium Sulfate 50%	3
Phosphoric 20%	3	Sodium Chloride 50%	3
Sulfuric 10%	3	Ferric Chloride 50%	2D
SOLVENTS		Sodium Hypochlorite 5%	2D
Ethyl Alcohol 95%	3	MISCELLANEOUS	
Ethyl Acetate	NR	Brake Fluid	3
Methanol	1	Skydrol	3
Methyl Ethyl Ketone	NR	Ethylene Glycol	3
Mineral Spirits	3	Propylene Glycol	3
Methylene Chloride	NR	Vegetable Oil	3
Toluene	2	Gasoline	3
Xylene	3	Urine	3
Trichlorethane	2	Bleach Solution	3
Isopropyl Alcohol	1	Diesel Oil	3
		Jet Fuel	3

1 = Incidental Contact (8 hrs)
2 = Splash & Spill (72 hrs)
3 = Extended Exposure (7 days)
D = Discoloration may occur
NR = Not Resistant
Dry film thickness @ 3.0 mils (2 coats @ 1.5 mils each)
Primer thickness not included