

**DUROPLEX®**  
**Textured Acrylic Coating**  
**For Interior Wall Finishes**

**TRIARCH**  
FINE ARCHITECTURAL FINISHES

**T302**

**DUROPLEX®**

Revised 12/30/2011

# **Guide Specifications**

**BEFORE SPECIFYING DUROPLEX®**

**Note to Specifier: remove this page before using these specifications.** TRIARCH finishes are handcrafted materials. The degree of texture, and the color proportions of multiple color designs, may vary depending upon applicator equipment and job site conditions. See project design control narrative below.

Duroplex® should be applied by applicators that have attended a Triarch product application training session. This helps to keep quality control high and the end result consistent with the design intent. TRIARCH does not, however, warrant the applicator's capabilities to handle a specific job or their workmanship on any project. It is up to the entity hiring the installer to insure that the installer is capable of doing a particular project. This is best accomplished by requiring a mock-up and providing design approval of the mock-up.

The basis of this design/performance package, and this specification, is Duroplex for an interior finish system. Additional reference documents on our website include:

- T102 Duroplex Data Page
- T101 SKIMM Data Page
- T1210 Duroplex Test Summary
- T502 Cleaning of Duroplex
- T402 Duroplex Materials and Labor Warranty
- T402M Duroplex Limited 10-year Warranty against Mold & Mildew

**Project Design Control Process in Summary**

- 1. Triarch furnishes design control samples at the time of material selection and specifications to enable the selection of color and pattern. These samples are typically 6" \* 6" (15.2 cm \* 15.2cm) in size.**
- 2. The selected installer should be required to submit samples to match the initial design control samples. Alternatively or in addition to contractor submittals, the contractor (installer) should install a job site mockup in the intended color and pattern. When accepted by project management, the mock up becomes the final and absolute control sample, replacing samples provided under item 1 above.**

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**SPECIFYING INTERNATIONAL PROJECTS**

International projects require the foreign national contractor to contact TRIARCH for obtaining pricing and product information. To facilitate international contact, please provide the additional supplemental information in any international project specification or finish sheet.

Phone: (country code 001) 401-822-4100  
Fax number: (country code 001) 401-822-2984  
Website address: [www.triarchinc.com](http://www.triarchinc.com)

TRIARCH maintains on-going relationships for installation in the following countries: throughout the Caribbean, Greece, The Kingdom of Saudi Arabia, Poland, Spain, and the United Arab Emirates (UAE). Installation in other countries is also possible.

TRIARCH  
GUIDE SPECIFICATIONS  
SECTION 09960  
Duroplex

## PART 1 – GENERAL

### 1.01 SUMMARY

- A. This document is intended to be used in preparing specifications for projects utilizing DUROPLEX® as manufactured by TRIARCH, 1-800-537-6111, [www.triarchinc.com](http://www.triarchinc.com).

### 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, Special Provisions, and Division 1-16 Specification sections, apply to work of this section.
- B. The publications listed below form a part of this specification to the extent referenced. The publications are referred within the text by the basic designation only. ASTM INTERNATIONAL (ASTM)
1. ASTM D 3273-00 (2000; R 2005) Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
  2. ASTM E 84 (2009c) Standard Test Method of Surface Burning Characteristics of Building Materials
  3. ASTM E 96/E 96M (2005) Standard Test Methods for Water Transmission of Materials
  4. ASTM D 4977 Surface Abrasion
  5. ASTM D5420 Gardner Impact
  6. LEED IEQ 4.2 (2009) Low Emitting Materials – Paints and Coatings. As cross referenced in LEED 4.2 to Green Seal GS-11: use either ASTM D6886-03 Standard Test Method for Speciation of the Volatile Organic Compounds (VOCs) or alternatively ISO 11890-2 for Paints and Varnishes. Either test method must use 280° C as a marker.
  7. Barcoll Hardness Index
  8. Federal Aviation Agency Vertical Burn Test #FAR 25.853 (b)
  9. UPITT LC50 for thermal toxicity
  10. Conforms to CHPS-CA section 01350
  11. EU construction products certification EN15824 (CE Mark)

**1.03 DESCRIPTION**

- A. Duroplex is a textured acrylic coating used as an interior wall finish.
- B. Design Requirements
  - 1. ACCEPTABLE SURFACES FOR DUROPLEX INCLUDE:
    - a. Drywall
    - b. Cementitious substrates such as concrete, concrete block, cement plaster, etc.
    - c. Ferrous metals
    - d. Galvanized surfaces
    - e. Painted surfaces
- C. Performance Requirements
  - 1. STANDARDIZED TESTS:
 

a. Barcoll Hardness Index	38 or greater
b. ASTM-E84 Flame Spread	15 or less
c. ASTM E84 Smoke Developed	5 or less
d. Federal Aviation Agency Vertical	0.1 seconds or less
e. Burn Test #FAR 25.853 (b)	
f. Water Vapor Permeability ASTM E-96, B	27.5 Perms or greater
g. ASTM-D3273-00 Surface Mold Resistance	10 (no growth)
h. UPITT (LC50 for thermal decomposition)	150 grams or greater
h. ASTM D 4977 Surface Abrasion	Class 3 over 5/8" drywall
i. ASTM D5420 Gardner Impact	Class 3 over Impact Resistant wallboard
i. LEED 4.2 for low VOC	complies

## 2. SOLVENT RESISTANCE: (1 hour soak)

- |                       |                             |
|-----------------------|-----------------------------|
| a. Water              | temporary slight softening* |
| b. Detergent          | no change                   |
| c. Ethanol            | no change                   |
| d. Naphtha            | no change                   |
| e. Ammonium Hydroxide | temporary slight softening* |
| f. Ethylene Glycol    | no change                   |
| g. Bleach (household) | temporary slight softening* |
| h. Mineral spirits    | no change                   |

\*Original hardness regained after drying.

## 3. STAIN RESISTANCE: (10 hour soak and wash with 409 Cleaner or bleach and water)

- |              |                  |
|--------------|------------------|
| a. Water     | no stain visible |
| b. Blood     | no stain visible |
| c. Urine     | no stain visible |
| d. Coffee    | no stain visible |
| e. Tea       | no stain visible |
| f. Blueberry | no stain visible |

## 4. MILDEW RESISTANCE:

- a. No visible mildew after incubation for ninety days (90) in 95 degrees F band 90% relative humidity under high contamination conditions.

## 5. COLOR:

- a. All pigments shall be free of heavy metals, fade resistant, and bleach resistant. All pigments shall be VOC and APEO free. Standard color selection provides 288 high performance colors. Custom coloration is also available using the same high performance pigments.

**1.04 QUALITY ASSURANCE:**

- A. COMPATIBILITY: Provide primers and other substrate preparation materials that are produced or are specifically recommended by the same manufacturer as the finish materials to insure compatibility of the system. Use thinners approved by the coating manufacturer, and use only within recommended limits.

- B. ISO 9001 and ISO 14001 manufacturing facility
  
- C. QUALIFIED APPLICATOR
  - 1. All bidding applicators should have attended a factory product application session and otherwise be qualified to apply materials prior to submitting bid. Applicator shall submit a photocopy of factory certificate as proof of attendance at factory training session with the bid.
  
- D. SKILLED WORKMANSHIP: All work shall be done by skilled mechanics in accordance with the best standard practice in the industry. Work shall be uniform in appearance, free of visual defects, and complete.
  
- E. COORDINATION OF WORK: Review other sections of these specifications in which prime paints, raw substrates, or other substances might be present to insure compatibility of total coatings systems. Upon request from other trades, furnish information or characteristics of coating materials provided for use to insure compatible substrate materials and finishes are used.

#### 1.05 SUBMITTALS:

- A. PRODUCT DATA: Submit manufacturer's technical information including installation instructions, product description, and product test data conforming to the test performances required herein. Test data may be submitted in printed form from the manufacturer's standard printed material; however, if requested, Contractor shall submit specific performance test information as certified by independent laboratory analysis (as furnished by the manufacturer to support performance claims).
  
- B. SAMPLES: Prior to beginning work, Contractor shall make and submit three (3) 8"X10" samples of the selected colors and textures for Architect's review. Provide for each sample a listing of materials and the application for each coat of material.

In addition to the above, Contractor shall install on the jobsite one sample of each Textured Acrylic Coating finish on each different typical jobsite substrate. Each sample shall be installed over an area of not less than thirty (30) square feet. Contractor shall also create or cause to be created temporary or permanent lighting which accurately reproduces finished-project lighting conditions for the purpose of viewing above samples. Work on the balance of the areas to be coated shall commence after Contractor has received written approval of the installed jobsite samples from Architect or Owner.

- C. QUALITY STANDARD: Final acceptance of Textured Acrylic Coating finish shall be based upon substantial duplication of jobsite samples produced in accord with 1.05--B above.

**1.06 DELIVERY AND STORAGE:**

- A. DELIVER MATERIALS to jobsite in the original, new and unopened packages and containers bearing manufacturer's name and label, and following information: Name or title of materials, manufacturer's stock and/or batch number, date of manufacture, contents of containers including color name and number.
- B. STORE MATERIALS NOT IN ACTIVE USE IN TIGHTLY COVERED CONTAINERS. Maintain containers in a clean condition, free from foreign materials and residue. Protect from freezing and maintain temperatures below 100 degrees F. Keep materials stored in an orderly and organized manner to reduce the risk of error. Do not stack materials more than three (3) containers high. Protect from fire hazards.

**1.07 JOB CONDITIONS:**

- A. APPLY materials only when surface temperature is between 60 and 100 degrees F (15 – 37° C) and expected to remain so for 24 hours. If conditions cause rapid drying of the materials before proper finishes can be completed, eliminate breezes, fans or other air movements which contribute to the problem, and, if necessary, dampen the substrate with finely misted water just prior to application.
- B. PROTECT finishes from casual impact and rain for a period of forty-eight hours after installation. Protect from heavy traffic for a period of at least three days. Protect all surfaces and adjacent areas not intended to be coated and clean immediately any spillage, droppings, or other extraneous contact of the materials with other surfaces.

**1.08 MINIMUM FACTORY MATERIAL WARRANTY REQUIREMENTS:**

Material & Labor Warranty-coating integrity	10 years- From date of application
Mold & Mildew Material Warranty	10 years- From date of application

**PART 2 – PRODUCTS**

*(NOTE TO SPECIFICATION WRITER: Texture and finish must be selected prior to bidding because of wide differences in labor costs for different application techniques. The CS# designation below provides a reference standard to the approved design control samples. The CS# is typically found on the upper right area of the design control samples originally created by Triarch. For samples taken from the Triarch Architectural Portfolio, the finish name is sufficient for specification purposes and the CS# specification may be deleted. For Specification writers who cannot use Duroplex's proprietary name, use the last sentence of Section 2.01 as the materials specification. Selection of texture, color and a CS# number are still appropriate for a specification that only refers to TEXTURED ACRYLIC COATINGS.*

**2.01 MATERIALS:** Provide DUROPLEX® Textured Acrylic Coating system as manufactured by TRIARCH. [www.triarchinc.com](http://www.triarchinc.com)

Texture to be: *(Enter the name of the selected texture).*

CS# *(Enter the Custom Sample Number provided by Triarch).*

Textured Acrylic Coating materials shall have the following minimum performance characteristics when finished and fully cured (28 days under nominal conditions) found in the product performance section 1.03.

### **PART 3 - EXECUTION**

#### **3.01 GENERAL:**

##### **A DESCRIPTION OF WORK:**

1. EXTENT of wall/ceiling coating work is indicated on drawings and schedules, as herein specified.
2. WORK INCLUDES masking, protection of adjacent surfaces, priming, finishing, and cleanup of all Textured Acrylic Coated areas throughout the project as designated on the drawings and finish schedules, except as otherwise specifically indicated.

(Write a general description of the scope of work) "TEXTURED ACRYLIC COATING" as used herein means specialty texture acrylic coatings having a minimum thickness of 20 mils and meeting the minimum performance specifications stated herein.

3. WORK SPECIFIED IN OTHER SECTIONS: Paint, stain, primer, other specialty coatings, fire proofing, tile, masonry, pre-finished panels, stains, preservative treatments, shop applied finishes, wall coverings, etc.
- B. PERFORM** preparation and cleaning procedures in accordance with manufacturer's recommendations and as herein specified, for each particular substrate condition.
- C. REMOVE** hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish coated, or provide masking or other protection prior to surface coating operations. Following completion of coating of each space or area, reinstall removed items.
- D. CLEAN** surfaces to be coated before applying any materials. Remove oils and grease prior to mechanical cleaning. Program cleaning and coating so that contaminants from cleaning process will not fall into wet or newly coated surfaces.

**3.02 SURFACE PREPARATION:** (Here select the substrate preparation method appropriate to the work)

- A. **DRYWALL:** Drywall shall be prepared to industry acceptable standard for hanging vinyl wall covering. Remove excess gypsum compound dust. Do not prime or seal the drywall except as specifically recommended by Texture Acrylic Coating manufacturer. For fast drying conditions, dampen surface slightly with a light spray mist of water just prior to application of acrylic wall coating materials. For damaged drywall, or after removal of old wall covering, patch/repair as needed to obtain a smooth surface and apply GARDZ® High Performance Sealer by Zinsser [www.zinsser.com](http://www.zinsser.com) following the manufacturer's label directions.
- B. **CEMENTITIOUS SUBSTRATES:** Prepare cementitious surfaces such as concrete, concrete block, cement plaster, etc. by cleaning to remove dust, grease, form release agents, etc.; then patch all major holes and honeycombs using structural grout manufactured for the purpose as specified in the concrete Division of these specifications. Then grind all projections above the planar surface until flush. Fill, and float smooth all recessed form seams and other minor imperfections using either SKIMM® Acrylic Surfacing Compound, or REFORMIT™ as manufactured by Triarch Industries. Allow Surfacing Compound to dry at least 24 hours under nominal conditions. If necessary, dampen dry cementitious surfaces just prior to installation of acrylic surfacing compound materials. Wipe away any active condensation or surface water sufficient to cause a wet glaze prior to beginning installation. **NOTE: Water sensitive materials such as gypsum based products are not recommended for skimming over concrete or CMU surfaces.**
- C. **FERROUS METALS:** Clean free of oil and surface contaminants with non-petroleum based solvent. Prime all bare metal surfaces with a good quality rust inhibiting primer prior to application of any Textured Acrylic Coating materials. Test adequacy of adhesion of primer to substrate prior to application of texture coating. Be sure to document results.
- D. **GALVANIZED SURFACES:** Clean free of oil and surface contaminants with non-petroleum based solvent. Prime with good quality primer designed for galvanized metal surfaces. Test adequacy of adhesion of primer to substrate prior to application of texture coating. Be sure to document results.
- E. **EXISTING PAINTED SURFACES:** All previously painted surfaces must be sound with the paint firmly adhered. Test adhesion of existing paint in random locations prior to application of texture acrylic coating. Be sure to document test results. If surface is dusty or dirty, clean surface with a mix of household ammonia and water (1 part ammonia to 3 parts water) to remove oils, dust, etc. If a high gloss paint that will result in poor adhesion, lightly sand surface to improve adhesion (total removal of gloss is not necessary). Test adequacy of adhesion of primer to substrate prior to application of texture coating. Be sure to document results.

**3.03 MATERIALS PREPARATION:**

- A. STIR MATERIALS before application with a power drill and a drywall compound paddle. Stir at approximately 350 RPM for two minutes while removing material from all sides and bottom of the container. Stir only as much material as will be used in a four (4) hour period or re-stir material left sitting in excess of four hours. RETAIN LID on containers until the material is in actual use. If hardened material accumulates on the sides of the container, carefully remove the hardened material, taking care to not allow any hardened material to fall into the wet material.
- B. THINNING: Thinning may be done with small amounts of clean water. See manufacturer's written instructions for thinning information.

**3.04 APPLICATION:**

- A. GENERAL: Apply coating materials in accordance with the manufacturer's instructions and recommendations as required to achieve the appearance of the approved samples and performance as specified herein. Coating materials shall be used as a system that may include primers or under coatings as required by the manufacturer's installation directions.
- B. FINAL DRY FILM thickness shall be a minimum average of 20 mils. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces.

*(NOTE TO SPECIFICATION WRITER: Some finishes require Primer that is supplied with the kit of materials. Other finishes use Undercoat that serves as both primer and base coat for the finish. Select either C. or D. or both C & D below for the particular finish or finishes selected for the work, but note that Primer and Undercoat are never used on the same area.)*

- C. FOR FINISHES WHICH REQUIRE PRIMER: Apply acrylic coating manufacturer furnished PRIMER with a 1/4 to 3/8 inch nap paint roller at a coverage rate of 240 square feet per gallon. Allow to cure until firmly set (normally 1 to 2 hours at 70° F [21° c]).
- D. FOR FINISHES WHICH REQUIRE UNDERCOAT: Apply factory supplied UNDERCOAT at a rate of 250 square feet per 65 pound net pail. Apply with a texture sprayer to achieve visible coverage. Wet film material should be a minimum of 20 mils thick. Apply UNDERCOAT to a uniform level finish without holidays or runs.
- E. APPLY FINISH COAT(S) in accordance with manufacturer's instructions and all finishes match quality samples previously approved by Architect.

**3.05 CLEANUP AND PROTECTION:**

- A. **CLEANUP:** During progress of work, remove from site discarded coating materials, rubbish, cans, and rags at the end of each work day in compliance with all local, state, and federal requirements.
- B. **PROTECTION:** Protect work of other trades, whether to be coated or not, against damage by coating work. Correct any damage by cleaning, repairing or replacing, and refinishing, as acceptable to Architect. Provide signs, barricades, etc. as required to protect new Textured Acrylic Coating work from damage by others (see Section 1.07-B of this Division for protection times)
- C. **AFTER COMPLETION** of work of all other trades, remove all protection materials (including other trades' if provided by them) and clean/touch up as necessary to restore coating work to new and unblemished condition.

END OF SECTION

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Information contained in these application instructions conforms to standard detail and product recommendations for the installation of Duroplex® as of the date of publication of this document and is presented in good faith. Triarch assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To insure that you are using the latest, most complete information, contact Triarch.

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