

**SECTION 09 77 00.11 (was 09775)**

**SANITARY WALL COVERING**

***PLAS-TEX®: PolyWall, Silk, NRP®, Thick Panels***

**\*\*\*\*\* Parkland Plastics, Inc. is the foremost manufacturer in the United States of plastic sheets with 100 percent recycled content. They produce a broad range of waterproof, sanitary wall coverings and wall and ceiling panels for a variety of interior applications.**

**This guide can be used to prepare a specification for incorporating PLAS-TEX® sanitary wall covering into a competitively bid construction project. PLAS-TEX® is waterproof, resistant to fungi and bacteria, durable, and recyclable. It does not contain fiberglass reinforcement and is designed for adhesive application to different wall substrates.**

**The specification section is organized by placing information in three standard parts:**

- PART 1 - GENERAL**                      **Describes administrative and procedural requirements.**
- PART 2 - PRODUCTS**                      **Describes materials, products, and accessories to be incorporated into the construction project.**
- PART 3 - EXECUTION**                      **Describes how the products will be installed at the construction site.**

**Throughout this product guide specification, references are made to other specification sections that might be contained in the project manual. These references are presented as examples and coordination reminders. For each project, these references will need to be revised to reflect actual sections being used.**

**Within the specification text, Imperial dimensions are presented first in brackets followed by System International Metric (SI) equivalents also in brackets. Depending on project requirements, either the Imperial or the SI metric equivalents will need to be deleted.**

**The specifier will need to edit this product specification for a specific project to reflect the options and applications being used. The guide section has been written so that most editing can be accomplished by deleting unnecessary requirements and options. Options are indicated by [ ]. Notes to assist the specifier in selecting options and editing the specification guide are printed in bold and indicated with \*\*\*\*\*. For final editing, all brackets and notes will need to be deleted from the guide.**

\*\*\*\*\*

**PART 1 - GENERAL**

**1.1 SUMMARY**

**\*\*\*\*\* Edit the following paragraph to reflect Project applications of PLAS-TEX® sheets. \*\*\*\*\***

A. Section includes: Waterproof, sanitary, sheets adhesive applied to [gypsum board] [concrete] [concrete unit masonry] [\_\_\_\_\_] walls of [kitchen] [food processing] [laundry] [toilet] [locker] [custodial] [animal containment] [\_\_\_\_\_] rooms including adhesive and moldings.

B. Related sections:

**\*\*\*\*\* List other specification sections dealing with work directly related to this section such as the following. \*\*\*\*\***

1. [Section 03300 - Cast-in-Place Concrete] [Section 03400 - Precast Concrete]: Concrete walls to receive sanitary wall covering.
2. Section 09260 - Gypsum Board Assemblies: Gypsum board and metal stud framing to receive sanitary wall covering.
3. Section 09779 - Sanitary Ceiling Panels: Waterproof, sanitary ceiling panels installed in suspended grid system.
4. Section 09780 - Sanitary Base and Rails: Extruded, mineral reinforced, polyethylene base and rails to be installed in conjunction with sanitary wall covering.

**1.2 REFERENCES**

**\*\*\*\*\* List by number and full title reference standards referred to in remainder of the specification section. Delete non-applicable references. \*\*\*\*\***

A. American Society for Testing and Materials (ASTM) Publications:

1. ASTM D570 - Water Absorption of Plastics.
2. ASTM D648 - Deflection Temperature of Plastics Under Flexural Load in Edgewise Position.
3. ASTM D695 - Compressive Properties of Rigid Plastics.
4. ASTM D696 - Coefficient of Linear Expansion of Plastics Between -30° C and 30° C with Fibrous Silica Dilatometer.
5. ASTM D732 - Shear Strength of Plastics by Punch Tool.

6. ASTM D2240 - Rubber Property Durometer Hardness.
7. ASTM D3029 - Impact Resistance of Flat Rigid Plastic Specimens by Means of Tup (Falling Weight).
8. ASTM E84 - Surface Burning Characteristics of Building Materials.

### **1.3 SUBMITTALS**

- A. Provide in accordance with Section 01330 - Submittal Procedures:
  1. Product data for wall covering and accessories showing compliance with specified requirements.
  2. Shop drawings: Indicate wall sheet layout, dimensions, moldings, and installation details.
  3. Samples:
    - a. Wall covering in selected type, finish, and color: [5 by 7 inches] [127 by 178 mm] minimum size.
    - b. [2 inches] [51 mm] minimum lengths of moldings.
  4. Manufacturer's installation and maintenance instructions.

### **1.4 QUALITY ASSURANCE**

- A. Sanitary wall covering shall comply with:
  1. United States Department of Agriculture (USDA) requirements for food preparation facilities, incidental contact.
  2. Food and Drug Administration (FDA) 1999 Food Code 6-101.11.
  3. State of California Proposition 65.
  4. Canadian Food Inspection Agency (CFIA) requirements.

## 1.5 DELIVERY, STORING, AND HANDLING

\*\*\*\*\* **PLAS-TEX® sheets expand and contract with temperature changes. Do not install sheets in facility subjected to extreme temperature changes and avoid these conditions during delivery and storage.** \*\*\*\*\*

- A. During delivery and storage keep sanitary wall sheets flat on smooth dry surface. Avoid extreme temperature changes.
- B. Do not install sanitary wall covering until building is enclosed, painting is complete, and temperature and humidity are similar to conditions of completed, occupied building.
- C. Prior to installation, store materials for 24 hours minimum in area of installation to achieve temperature stability.

## PART 2 - PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS

- A. Parkland Plastics, Inc., P.O. Box 339, 104 Yoder Drive, Middlebury, Indiana 46540; 800-835-4110; www.parklandplastics.com.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01630 - Product Substitution Procedures.

### 2.2 SANITARY WALL COVERING

\*\*\*\*\* **Parkland Plastics, Inc, manufacturers the following five types of PLAS-TEX® sanitary wall covering sheets. They vary in surface finish and thickness. Surfaces finishes are matte, smooth, scored tile pattern, and cracked-ice texture which is also referred to as pebbled texture.**

**PLAS-TEX® PolyWall: Sheet with embossed matte surface similar in appearance to vinyl wall covering. Available thickness are 1/16 and 3/32 inch (1.6 and 2.3 mm).**

**PLAS-TEX® Silk - Sheet with smooth surface similar in appearance to semi-gloss paint. Thicknesses is 3/32 inch (2.3 mm) thick.**

**PLAS-TEX® NRP® (Non-fiberglass reinforced plastic) Sheet with cracked-ice (pebbled) surface similar in appearance to FRP (fiberglass reinforced plastic) panels. Available thickness are 1/16 and 3/32 inch (1.6 and 2.3 mm).**

**PLAS-TEX® Thick Panels - Thick sheets with cracked-ice (pebbled), matte, and smooth surface options. Available thickness are 1/4, 3/8, 1/2, 5/8, and 3/4 inch (6.3, 9.5, 12.7, 15.9, and 19 mm).**

**Duro-Tile - 3/16 inch (4.8 mm) sheet scored in 4 by 4 inches (102 by 102 mm) tile pattern.**

**Edit the following paragraph to reflect selected type of sanitary wall covering and surface finish. \*\*\*\*\***

- A. Type: Waterproof, mineral reinforced, sanitary wall covering with [matte] [smooth] [cracked-ice] [[4 by 4 inches] [102 by 102 mm] scored tile] surface; PLAS-TEX® PolyWall] [PLAS-TEX® Silk] [PLAS-TEX® NRP®] [PLAS-TEX® Thick Panels] [Duro-Tile] as manufactured by Parkland Plastics, Inc.

**\*\*\*\*\* PLAS-TEX® sheets are fabricated from recycled polyethylene and polypropylene resins. These two incompatible resins are mixed with calcium carbonate and extruded to form a chemically inert sheet. The calcium carbonate minimizes thermal linear expansion and eliminates the need for reinforcement such as glass fibers. Most other manufacturers of sanitary wall panels use fiberglass reinforcement which results in a product which cannot be recycled and which presents problems when sheets are field cut. \*\*\*\*\***

- B. Material: Polyethylene and polypropylene resins mixed with calcium carbonate and extruded to form chemically inert, mineral reinforced sheet. Sheets with fiberglass reinforcement are not acceptable.
1. Recycled content: 90 percent minimum.
  2. Recyclable content: 100 percent.

**\*\*\*\*\* There are seven PLAS-TEX® sheet colors. Not all colors are available for all types and thickness of PLAS-TEX® sheets. Refer to Parkland Plastics product literature for color options for selected sheet. \*\*\*\*\***

3. Color: [Almond] [Black] [Bright white] [Dark gray] [Light Gray] [Medium gray] [Pewter white] [Selected by Architect from manufacturer's full range]. Color shall be consistent for full thickness.

**\*\*\*\*\* PLAS-TEX® sheets are 48 inches (1219 mm) wide. Available heights are 96, 120, 144 inches (2438, 3048, and 3658 mm). Sheets are easily cut in field to required sizes. \*\*\*\*\***

- C. Sheet size: [48 inches wide by [96] [120] [144] inches high.] [1219 mm wide by [2438] [3048] [3658] mm high.]

\*\*\*\*\* **Refer to listing above for thicknesses available for selected PLAS-TEX® sheet.**

\*\*\*\*\*

- D. Sheet thickness: [[1/16] [3/32] [1/4] [3/8] [1/2] [5/8] [3/4] inch.] [[1.6] [2.3] [6.3] [9.5] [12.7] [15.9] [19] mm.]
- E. Performance characteristics:
1. Resistant to fungi and bacteria growth, cleaning agents, acids, and other chemicals.
  2. No yellowing or color change with corrosive environments.
- F. Fire rating tested in accordance with ASTM E84: Class C.
1. Flame spread: 105 maximum.
  2. Smoke development: 435 maximum.
- G. Physical properties:
1. Water absorption tested in accordance with ASTM D570: 0.055 percent maximum.
  2. Coefficient of linear thermal expansion tested in accordance with ASTM D696:  $3.84 \times 10^5$  inch per inch per degree F.
  3. Shear strength tested in accordance with ASTM D732: [2970 pounds per square inch] [217 kilograms per square centimeter] minimum.
  4. Hardness tested in accordance with ASTM D2240: 51 Shore D minimum.
  5. Compressive strength tested in accordance with ASTM D695: [5293 pounds per square inch] [387 kilograms per square centimeter] minimum.
  6. Impact resistance tested in accordance with ASTM D3029:
    - a. [22.6 inch pounds minimum at 73 degrees F.] [2.6 kilogram meters minimum at 23 degrees C.]
    - b. [5.9 inch pounds minimum at minus 4 degrees F.] [0.7 kilogram meters minimum at minus 20 degrees C.]
  7. Heat deflection temperature tested in accordance with ASTM D648: [124 degrees F.] [51.3 degrees C.]

### 2.3 ACCESSORIES

- A. Adhesive: Trowel grade, non-flammable or latex adhesive as recommended by sanitary wall covering manufacturer. Do not use solvent based or tube style adhesives.
- B. Moldings: Extruded polyvinyl chloride (PVC) channel type moldings with flanges to fit beneath wall sheets.
  - 1. Types: Shapes for panel division, inside and outside corners, and edge caps.
  - 2. Color: Match sanitary wall covering color.
- C. Sealant: Silicone type as specified in Section 07900 - Joint Sealers and approved by wall covering manufacturer for this application.

### **PART 3 - EXECUTION**

**\*\*\*\*\* PLAS-TEX® sheets are recommended for interior installation only. \*\*\*\*\***

#### 3.1 PREPARATION

**\*\*\*\*\* PLAS-TEX® wall covering can be installed full height or as wainscot. A solid polyethylene base and wall protection rail can be used in conjunction with PLAS-TEX® wall covering. Edit and include the following paragraph for this application. \*\*\*\*\***

- A. Coordinate sanitary wall covering installation with provision of [base] [wall protection rails] specified in Section 09780 - Sanitary Base and Rails.
- B. Verify that substrates to receive sanitary wall covering are flat, clean, dry, solid, and free from coatings and defects detrimental to installation.
- C. Verify that plumbing, mechanical, and electrical services within walls have been installed, tested, and approved.

**\*\*\*\*\* Include the following paragraph if wall covering is applied to concrete and masonry walls. \*\*\*\*\***

- D. Ensure that [concrete] [masonry mortar] is completely cured. Apply leveling coat as required for uneven substrate and to provide flat, uniform surface for wall covering.
- E. Remove by sanding or other means any substrate waterproofing to ensure adhesive can adequately cure.
- F. Remove bumps, loose paint or plaster, residue, and dirt.

#### 3.2 INSTALLATION

- A. Install wall covering in accordance with manufacturer's instructions and approved shop

drawings at locations indicated on Drawings.

**\*\*\*\*\* Typically PLAS-TEX® sheets are installed vertically. \*\*\*\*\***

B. Install sheets vertically with adhesive.

**\*\*\*\*\* PLAS-TEX® sheets can be easily field cut since they do not contain fiberglass or other irritants. \*\*\*\*\***

C. Cutting: Cut sheets by scoring and snapping, with sheet metal shears, or sawing with fine toothed blade.

D. Penetrations and openings: Drill round openings. For rectangular cutouts, first drill hole at each corner to relieve stress. Prior to installation, position panel in place and verify cutout location and size are accurate.

E. Adhesive: Apply to panel with notched trowel at approximately [1 gallon per 64 square feet.] [1 liter per 1.6 square meters.] Do not apply adhesive to wall.

F. Position sheet against wall. Ensure sheets are not tightly fitted. Allow [1/4 inch] [6 mm] gap at top and bottom of vertical sheet and [1/8 inch] [3 mm] gap at vertical joints between panels and adjacent construction. Secure sheet by applying pressure with roller over entire surface. Ensure adhesive contact is even and complete.

G. Moldings: Apply moldings in conjunction with panels.

1. Provide moldings for wall covering joints, perimeter edges, and corners. Neatly cut molding to required lengths. Ensure moldings are straight and correctly aligned.

2. Allow [1/8 inch] [3 mm] space in molding channels for wall covering expansion.

**\*\*\*\*\* For watertight installation, sealant should be applied in all molding channels. \*\*\*\*\***

3. Apply continuous bead of sealant in all molding channels.

H. Immediately remove excess adhesive and sealant from wall covering and moldings. Adhesive and sealant should not be visible in completed system.

- I. Protect installed wall covering from subsequent construction activities.

**END OF SECTION**