

**SECTION 09780**

**SANITARY BASE AND PROTECTION RAILS**

**\*\*\*\*\* 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 Duro-Base extruded polyethylene wall base and wall protection rails into a competitively bid construction project. Duro-Base is waterproof, resistant to fungi and bacteria, scratch resistant, durable, chemical resistant, and it does not contain fiberglass reinforcement.**

**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.**

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**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section includes: Waterproof, sanitary, extruded polyethylene wall base and wall protection rails including fasteners and other accessories.

**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 648 - 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 base, rail, and accessories showing compliance with specified requirements.
  2. Shop drawings: Indicate dimensions and installation details.
  3. Samples: [6 inches] [152 mm] minimum lengths of base and rail.
  4. Manufacturer's installation and maintenance instructions.

**1.4 QUALITY ASSURANCE**

- A. Sanitary base and rail 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**

**\*\*\*\*\* Duro-Base expands and contracts 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 base and rail sections flat on smooth dry surface. Avoid extreme temperature changes. Do not lean pieces against wall to avoid taking curved set.
- B. Do not install base and rail 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 BASE AND RAIL**

- A. Type: Waterproof, mineral reinforced, sanitary wall base and wall protection rail; Duro-Base as manufactured by Parkland Plastics, Inc.

**\*\*\*\*\* Duro-Rail is 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. Material fabricated with fiberglass reinforcement results in a product which cannot be recycled and which presents problems when cut. \*\*\*\*\***

B. Material: Polyethylene and polypropylene resins mixed with calcium carbonate and extruded to form chemically inert, mineral reinforced sheet. Material with fiberglass reinforcement is not acceptable.

1. Recycled content: 90 percent minimum.
2. Recyclable content: 100 percent.

**\*\*\*\*\* Standard colors for Duro-Base are dark gray and black. Bright white, pewter white, almond, and brown are available as special orders. \*\*\*\*\***

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

C. Finish: Smooth.

D. Profile: Flat with one grooved reveal and top edge beveled to eliminate sharp edge.

**\*\*\*\*\* Duro-Base is available in 3/8, 1/2, and 3/4 inch (10, 13, and 19 mm) thicknesses and in 4, 5, 6, and 10 inches (103, 127, 152, and 254 mm) widths. Lengths up to 144 inches (3658 mm) are available. Material is easily cut to size on site. \*\*\*\*\***

E. Size:

1. Thickness: [[3/8] [1/2] [5/8] inch.] [[10] [13] [16] mm.]
2. Width: [[4] [5] [6] [10] inches.] [[103] [127] [152] [254] mm.]
3. Length: [[\_\_\_\_\_] [inches] [mm].] [Maximum possible lengths to accommodate applications shown on Drawings with minimum number of joints.]

F. Performance characteristics:

1. Resistant to fungi and bacteria growth, cleaning agents, acids, and other chemicals.
2. No yellowing or color change with corrosive environments.

G. Fire rating tested in accordance with ASTM E84: Class C.

H. 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 PSI] [217 kg per sq cm] minimum.
4. Hardness tested in accordance with ASTM D2240: 51 Shore D minimum.
5. Compressive strength tested in accordance with ASTM D695: [5293 PSI] [387 kg per sq cm] 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

**\*\*\*\*\* Base and rails are typically installed with stainless steel screws. Mechanical fasteners can be used in conjunction with adhesive for extra secure installation. \*\*\*\*\***

- A. Adhesive: Trowel grade, non-flammable adhesive as recommended by sanitary base and rail manufacturer.
- B. Screws: Stainless steel of type, size, and spacing recommended by base and rail manufacturer.

**PART 3 - EXECUTION**

\*\*\*\*\* **Duro-Base is recommended for interior installation only.** \*\*\*\*\*

**3.1 PREPARATION**

\*\*\*\*\* **Duro-Base can be used in conjunction with applied wall coverings and wall panels. Edit and include the following paragraph for this application.** \*\*\*\*\*

- A. Coordinate installation of wall base and rails with provision of wall finish specified in [Section 09775 - Sanitary Wall Covering] [Section 09776 - Self-Supporting Sanitary Wall and Ceiling Panels] [Section 09777 - Composite Structural Sanitary Panels] [Section 09778 - Insulating Sanitary Wall Panels] [\_\_\_\_\_].
- B. Coordinate installation of wall base with provision of floor finishes specified in [Section 09650 - Resilient Flooring] [Section 09680 - Carpet] [\_\_\_\_\_].
- C. Verify that substrates to receive sanitary wall base and rails are flat, clean, dry, solid, and free from coatings and defects detrimental to installation.

**3.2 INSTALLATION**

- A. Install wall base and wall protection rails in accordance with manufacturer's instructions and approved shop drawings at locations indicated on Drawings.
- B. Cutting: Cut base and rail sections by sawing with fine toothed blade. At corners provide mitered cuts. Use maximum lengths to minimize joints. Avoid lengths less than [24 inches] [610 mm].
- C. Install base and rails straight, level, and tight to wall. Provide scarf joints between pieces.

\*\*\*\*\* **Edit the following paragraph to indicate if fasteners are used separately or in conjunction with adhesive.** \*\*\*\*\*

- D. Secure base and wall rails with stainless steel screws. [Install in conjunction with adhesive.] Place fasteners uniformly in pre-drilled, countersunk holes.

\*\*\*\*\* **For watertight installation, sealant should be applied in base and rail joints.** \*\*\*\*\*

- E. Neatly apply sealant in all base and rail joints. Apply sealant to end of installed section prior to installation of subsequent section.
- F. Immediately remove excess adhesive and sealant from base and rails.

**END OF SECTION**