



## PART 1 — GENERAL

### 1.0 SUMMARY

- A. Interior waterproof, washable, solid polymer-clad fire-rated [1] wall panels:
    - 1. Commercial Wall Panels (Typically 4' x 8', 10', 12').
    - 2. Material Standards, Performance, and Qualifications.
    - 3. Product Color, Size, and Performance Availability.
    - 4. Installation and Material Protection.
    - 5. Product Care and Cleaning.
    - 6. Specification Language.
- [1] Fire-rated under ASTM E-84.
- B. Related Sections include the following:
    - 1. Parkland™ DURO-THERM FR-Series LEED applicability: see section 1.5 F. LEED submittals. See manufacturer's product content statement available upon request.

### 1.1 RELATED SECTIONS

- A. Section 06050 Wood and Plastics.
- B. Section 07050 Thermal and Moisture Protection.
- C. Section 07210 Building Insulation.
- D. Section 9200 Plaster, Stucco, and Gypsum Board.
- E. Section 09770 Special Wall Surfaces and Plastics.
- F. Section 10260 Wall and Corner Guards.

### 1.2 REFERENCED STANDARDS

- A. American National Standards Institute (ANSI).
- B. ASTM International (ASTM):
  - 1. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
- C. National Electrical Manufacturers Association (NEMA).
- D. Underwriters Laboratory (UL).

### 1.3 DEFINITION

- A. Parkland DURO-THERM-FR and DURO-THERM Lite-FR (DURO-THERM FR-Series) wall panels defined as: Waterproof polymer alloy faced permanently laminated composite insulative wall panels featuring integral reinforcement, pigments, and high performance characteristics, and meeting applicable building materials standards; NEMA, ANSI, ASTM, and California Proposition 65 and having minimum physical, performance, and environmental properties specified.
- B. Appearance: Monochrome, textured, flat insulative wall panels.
- C. Composition: Engineered permanently laminated fire-rated<sup>[1]</sup> insulative composite panel.

[1] Fire-rated under ASTM E-84.

- 1.4 \*\* NOTE TO SPECIFIER \*\* Parkland™ DURO-THERM FR-Series panel installations provide a unique combination of features including solid (not painted or coated) scrubbable waterproof outer surface of permanently laminated composite construction that will never rot, and feature best-in-class water, moisture, impact, mold, mildew, and stain resistance, and insulative performance.

### 1.5 SUBMITTALS

- A. Submit under provisions of Sections Section 06050, 09200, 09770, and 10260.
- B. Product Data: Full suite of documents available for direct-to-stud and glue-up installation, and available fasteners and moldings, including; Installation Guide(s) for installation over bare stud and drywall walls, various specialty guides, warranty, and general information.



## PART 1 — GENERAL (CONT.)

### 1.5 SUBMITTALS (Continued)

- C. Shop Drawings: DURO-THERM FR-Series wall panels. DURO-THERM-FR and DURO-THERM Lite-FR install with approved attachment systems over bare studs or walls. Show location of each item, dimensioned plans, details, attachment locations, notch and cutout locations, and any other components required prior to commencement of work.
1. Show locations and sizes of cutouts, electrical switch and outlet openings, holes, and fixture information for wall panels.
  2. Show location of notches, mechanical penetrations, finished corners, and special areas.
  3. DURO-THERM-FR, available studs or approved equivalent blocking locations are required prior to commencement of work. See installation guide or contact Parkland for more requirements and information.
  4. DURO-THERM Lite-FR, walls are required to be clean, flat, dry, and solid. See installation guide or contact Parkland for more requirements and information.
- D. Samples: For each type of product specified, 3.5 inch x 5 inch square sample of DURO-THERM-FR material in specified texture and color.
1. Cut sample and seam together for representation of manufacturer's seaming system..
    - i. Seam with accessory molding
  2. Indicate full range of color.
  3. Approved samples may be retained by manufacturer as a standard for work.
- E. Engineering Calculations: General contractor or project architect shall submit any required engineering calculations (such as insulative requirements) as per local and state building codes, showing the installed panels and attachment systems meet all applicable project requirements and building codes.
- F. LEED Submittals:
1. MR Credit 5.1 and 5.2 Regional Materials:
    - a. Product origin: Middlebury, Indiana, USA
      - i. Panel types, thickness, and weight:
        - a) DURO-THERM-FR 5/8" thick, 1.4 Lb./ S.F.
        - b) DURO-THERM Lite-FR 3/8" thick, > 1 Lb./ S.F.
  2. IEQ Credit 4.1 Low Emitting Materials: Adhesives and Sealants
    - a. Parkland DURO-THERM FR-Series components are not known to contain any VOC materials and have no intentionally added VOC content.
- G. Maintenance Data:
1. See section 1.9, and Use and Care Guide for more information.

### 1.6 QUALITY ASSURANCE QUALIFICATIONS

- A. Parkland DURO-THERM FR-Series insulative commercial wall panels comprised of non-porous solid waterproof polymer alloy faced permanently laminated composite insulative wall panels featuring integral reinforcement, pigments, and high performance characteristics.
- B. Environment: Parkland Plastics DURO-THERM FR-Series may be used in buildings that are non-climate-controlled.
- C. Installer Qualifications: Work of this section shall be by an experienced, qualified installer.
- D. Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, seam locations, and other components prior to commencement of work.

### 1.7 DELIVERY, STORAGE AND HANDLING

- A. Do not deliver components to project site until areas are ready for installation.
- B. Store DURO-THERM-FR-Series panels and moldings at the temperature and environmental conditions that the area will be during use for a minimum 48 hours prior to installation. It is recommended that these conditions be maintained both during and after the installation process as well.
- C. Installer to handle materials to prevent damage to finished surfaces, and panel edges, and contamination of panel rear face.



**PART 1 — GENERAL (CONT.)**

**1.8 WARRANTY**

- A. Provide manufacturer's warranty against defects in materials.
  1. Warranty shall provide material to repair or replace defective materials returned to manufacturer as specified in manufacturer's warranty.
  2. Warranty shall not cover damage caused by physical or chemical abuse, misuse, incompatibility of materials, improper installation, or inappropriate installation environment, or damage from insufficient anchoring into structure, adverse conditions at time of construction or thereafter, or aesthetic concerns over undressed or uncovered edges.
  3. Warranty shall be non-transferable to subsequent owners.
  4. Manufacturer's Warranty Period: 1 year.
  5. Wall panels to be warranted by manufacturer

**1.9 MAINTENANCE**

- A. Removal of stains with common janitorial bleach-free cleaners. Occasional cleaning with a mild janitorial surface cleaner (e.g. Windex®, Fantastik®) will remove occasional dust or dirt, and maintain the beauty of exposed components.
  1. Routine and regular cleaning with mild soapy water solution.
  2. With routine cleaning dirt and stains will not build up, see Use and Care Guide for more information.
  3. DURO-THERM family products may be pressure-washed with mild detergent with excellent results. **Use a fan spray pattern with pressure under 1000 PSI and keep nozzle at least 18" from surface.** Test pressure settings and distance from the nozzle to the tile surface for good results prior to commencement of work as excess pressures can damage surface finish.
- B. Acceptable Cleaning Materials:
  - Soapy Water
  - Kaboom® with OXI CLEAN® Stain Fighter
  - Formula 409® All Purpose Cleaner
  - Windex® Multi-Surface Cleaner
  - Fantastik® Multi-Purpose Cleaner
  - DURO-LAM surfaces may be sanitized with Clorox® Anywhere Hard Surface™ Daily Sanitizing Spray
  - Cascade® 5% detergent solution
- C. See appropriate product Use and Care Guide for more information.

**PART 2 — PRODUCTS**

**2.0 MANUFACTURER**

**A. Parkland™ Plastics**  
104 Yoder Drive  
Middlebury, INDIANA  
46540 USA  
1-800-835-4110

**2.1 PRODUCT DESCRIPTION**

- A. Description:
  1. Parkland DURO-THERM FR-Series wall panels defined as non-porous, waterproof 100% polymer alloy cladding permanently bonded over MgO & fluted polypropylene panels meeting applicable building; NEMA, UL, ANSI, ASTM, materials standards, and having minimum physical, performance, and environmental properties specified.
- B. Typical In-Stock Sheet Thickness, Size, Color, and Textures (Call for custom product).
  1. DURO-THERM-FR Panels

Thickness	Thickness	Color	Texture	Size
DURO-THERM-FR	5/8"	White, Various	Smooth, NuMatte, Custom	4' x 8' 4' x 10'
DURO-THERM Lite-FR	3/8"	White, Various	Smooth, Cracked-Ice, NuMatte, Custom	



**PART 2 — PRODUCTS (CONT.)**

**2.2 PERFORMANCE CHARACTERISTICS**

A. Product Performance Table: 10mm substrate with a .050 laminate.

ASTM E-84	Flame Spread	Class-A <sup>(1)</sup>
ASTM E-84	Smoke Developed	Class-A <sup>(1)</sup>
ASTM D-3273	Resistance to Growth of Mold	(10 rating)
ASTM D-4226	Drop Dart Impact Test	25.8 cm, (Mean Failure Height)
		9.11 joules, Mean Failure Energy
ASTM D-696	Coefficient of Linear Thermal Expansion	49.8 x 10 <sup>-6</sup> in/in deg F
ASTM D-570	Water Absorption	0.005%
ASTM D-2240	Hardness	69 Shore D
Weight	Weight Pounds per S.F.	DURO-THERM-FR 1.75 Lb./ DURO-THERM Lite-FR is > 1 Lb.
ASTM D-790	Flexural Strength Test	74,962 psi Modulus of Elasticity
ASTM D-638	Flexural Test	1,075 psi, Flexural Modulus
ASTM D-638	Tensile Test	2,900 psi, Tensile Strength

(1) Per ASTM E-84 Steiner Tunnel testing for flame spread and smoke developed.

B. Institutional Affiliations and Approvals:

1. National Association of Home Builders (NAHB) Complete testing results available.
2. International Building Code (IBC), passes code 2603.10.
3. Member US Green Building Council (USGBC)
4. Underwriters Laboratories (UL).

**2.3 MATERIAL QUALIFICATIONS**

- A. Clad surface does not support the growth of mold or mildew.
- B. All products 100% fiberglass-free.
- C. All panel faces 100% waterproof.

**2.4 ACCESSORIES, ADHESIVES, AND SEALANT**

- A. Panel-to-panel moldings, corner moldings, and end cap moldings.
- B. Panel adhesives [All 100% VOC-free]:
  1. Seal-Bond 105 tube adhesive (10 oz. tube).
  2. Parkland Panel Adhesive.

**PART 3 — EXECUTION [INSTALLATION PROCESS]**

**3.0 EXAMINATION**

- A. Examine wall area site conditions for compliance with requirements for installation tolerances, and other conditions affecting performance of work.
- B. Do not proceed with installation until substrates have been properly prepared, site meets manufacturers requirements, and any deviations from manufacturer's specs are corrected. Commencement of installation constitutes acceptance of conditions.
- C. Prepare work area using the methods recommended by the manufacturer for achieving the best result for occupied use conditions.
- D. If site preparation is the responsibility of another installer, notify Architect in writing of any deviations from manufacturer's recommended installation and use conditions.



**PART 3 — EXECUTION [INSTALLATION PROCESS] (CONT.)**

**3.1 INSTALLATION: Installer shall:**

- A. Install components plumb, level, and rigid, scribed to adjacent finishes, fitting panels and moldings per manufacturer specifications at all surfaces and walls, fixtures and openings in accordance with approved specifications, instruction, guidelines, and product data.
  1. Form field joints using manufacturer's recommended accessories, and seal joints with manufacturer-approved sealant if specified.
  2. Cut and finish component edges to a smooth appearance and feel with ordinary tools and fine sandpaper.
  3. Carefully dress joints smooth, remove all surface residue and clean all surfaces.

**3.2 REPAIR**

- A. Repair dinged or damaged panels with utility knife, plastic file, or fine sandpaper. Replace panels that cannot be repaired to Architect's satisfaction.

**3.3 CLEANING AND PROTECTION**

- A. Keep components clean during installation, and clean and cover with protective covering once work is complete.
- B. Remove excess adhesives, sealants and other stains.
- C. Where specified, protect surfaces from damage during construction.

**3.4 MATERIAL SCHEDULE**

- A. Wall panels:
  1. Product: Parkland DURO-THERM-FR or DURO-THERM Lite-FR \_\_\_\_\_
  2. Panel Texture: \_\_\_\_\_  
(DURO-THERM-FR Smooth, NuMatte, Custom, DURO-THERM Lite-FR, Cracked-Ice, Smooth)
  3. Panel Color: \_\_\_\_\_  
(White, various custom colors available on DURO-THERM-FR)
  4. Panel Thickness: \_\_\_\_\_  
(DURO-THERM-FR is 5/8" thick, DURO-THERM Lite-FR is 3/8" thick)

**ARCHITECT'S SPECIFICATION:**

**DURO-THERM-FR Series**

Walls shall be covered with Class A insulative non-porous, solid, waterproof polymer alloy-faced permanently laminated composite wall panels featuring integral reinforcement, pigments, and high performance panels of specified thickness. All insulative wall panel materials to be 100% fiberglass-free, with no known VOC content. All panel joints shall use manufacturer's specified accessory components and be adhesive and drywall mud-free with two-piece moldings dressing and concealing panel edges at all seams, corners, and edges. Any sealant shall be approved by the panel manufacturer.

For more information call: 800.835.4110 • or Visit: [www.parklandplastics.com](http://www.parklandplastics.com)

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