

DURO-THERM

by Parkland Plastics, Inc.

This publication describes the uses, construction and installation methods for DURO-THERM.

Complete physical property data, cleaning procedures, flame and smoke, and other tests are available on our web site, www.parklandplastics.com as well as specific installation procedures for various types of construction.

Parkland Plastics is the foremost manufacturer of plastic sheet with 100% recycled content in the USA, with a proprietary process developed over 10 years.

We extrude sheet up to 3/4" (19mm) thick which we fabricate using a high accuracy beam saw and a CNC router to make complex shapes. The thick sheet is also

machined into profiles in our facilities to make base molding, chair rail and other profiles. In addition, we can laminate our sheet on to a variety of substrates, such as gypsum wall board, insulation foam, plywood and fluted plastics.

Many of our products are designed with the specific needs of our customers in mind, such as the base and chair rail moldings that we make to protect walls from damage by shopping carts, cleaning equipment and even fork lifts. Other products are designed with ease of installation, low maintenance and moisture resistance in mind to minimize downtime, construction costs and ongoing maintenance expense.

What is DURO-THERM?

DURO-THERM is a mineral reinforced Polyethylene sheet laminated to a fluted Polypropylene backer.

Product Uses

1. Wall coverings for food processing plants or other areas where the key concerns are sanitation and ease of cleaning.
2. Ceiling tiles when moisture resistance, cleanability and resistance to mold and mildew are important considerations.
3. Renovation over concrete block, concrete panels or other rough surface to create a low maintenance, washable surface.
4. Factories where chemical resistance is an important consideration.
5. Wet or moist environments - walls and ceilings.

Features and Benefits

100% Waterproof

- No water damage with frequent wash-down
- No swelling, no rotting

Bridges Cracks, Grout Lines and Uneven Walls

- Reduce preparation and installation costs
- Reduce installation downtime

Brightens & Insulates

- Reduce operating costs
- R3 insulating value
- Reduce lighting costs

Exclusive Hygienic Properties

- Clinically proven to resist bacterial growth
- Will not harbor E.coli, black mold or staph

Chemically Resistant

- Use cleaners of all types without damage
- No yellowing or color change with corrosive environments
- Acid resistant
- Reduce maintenance costs



Duro-Therm panels used in a ceiling.

Light Weight

- Easy to install
- Reduce roof load when used as ceiling

Made From Recycled Plastic

- Buy recycled without cost penalty and get superior product.

Sizes and Types Available

- Panels: 15/32" x 4' x 8' (12x1220x2440mm), 10' and 12'
- Ceiling Grid: 23-3/4" x 47-3/4" (604x1212mm), 23-3/4" x 23-3/4" (604x604mm) in cracked ice texture.

For More Information Please Contact us at:

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Custom Products

1. Dimensionally stable material with coefficient of thermal expansion of 3.5 in/in/°F x 10⁻⁵ (6.3mm/mm/°C x 10⁻⁵)
2. Other gauges of fluted backer to make a 3/16" (4.75mm), 5/16" (8mm) or 9/16" (14.25mm) panel
3. Sizes up to 4' x 16' (1220 x 4880mm)
4. Moldings and joining strips up to 16' (4880mm) long.
5. Can vary the thickness of the laminate depending on the application from 3/16" (4.75mm) to .040 (1mm).
6. Laminate on both sides for applications in which both sides are visible, or for greater temperature resistance.

Product Limitations

1. Temperature variation or high ambient temperature when the product is in use. The standard product will move .010"/foot (.83mm/m) with a 10°F change in temperature. So, if you have a 10' (3050mm) panel and a 50° temperature change, it will move about 1/2" (13mm). With the dimensionally stable material the panel will move about 7/32" (5.6mm). The standard panel is good for an operating temperature of about 110°, but with modification we can make panels that will withstand higher temperatures.
2. Class C flamespread (ASTM E-84). This is acceptable in most environments.
3. This product is not structural.

Key Variables to Consider in Selecting the Right Product

1. Abrasion resistance. For areas with light wear, select a textured product rather than a smooth product.
2. Expected abuse. The higher the expected abuse, the thicker the laminate.
3. Temperature range under normal operating conditions. If the temperature variations will be more than 20°F, select the dimensionally stable product.
4. Operating temperature. If there will be periods of time when the ambient temperature will be higher than 110°F, select the panel with laminate on both sides.

Installation Instructions

- Store the DURO-THERM panels flat. Never lean them against a wall, as they will take set. Allow time for the DURO-THERM to come to room temperature before installing.
- Wall preparation is simple and minimal. Nails or screws that are protruding should be dealt with and the surface should be wiped clean of dust. Grease and loose paint should also be removed.
- Put a bead of panel adhesive down each stud or purling. When applying over a solid wall, make a pattern on the wall as you would if applying a hardboard (masonite) panel.
- Put the DURO-THERM panel in place, then pull it off to allow the solvent in the adhesive to dissipate, then set the panel in place again. Since the panels are very light weight, the adhesive will hold them.
- Leave a gap of 1/8" (3.2mm) between each panel to allow for expansion. We recommend using divider moldings, which we can supply. Leave a gap of 3/16" (4.75mm) along the top and bottom of each panel. We can supply cap, cove base and inside corner moldings for these applications.
- Fasten the panel with nylon rivets. We supply two-piece expansion rivets for use in concrete and one-piece rivets for attaching the panels to wood or steel. They should be placed on 16" (406mm) centers or on every stud or purling 16" (406mm) apart. We recommend the use of nylon rivets instead of galvanized or steel screws to preserve the insulating value of the panel.
- For two-piece expansion rivets use a .257" (6.5mm) or "F" drill bit. One-piece rivets require a .281" (7.15mm) or "K" drill bit.
- Generally one divider molding will be required for each panel. The corners and caps will vary by the job.
- We also supply color matched rivets when desired to use as mechanical fasteners for the panels.
- These panels are lightweight and easy to install by any contractor familiar with interior panels.
- We also offer additional installation assistance via our technical service 800 number.

Available Finishes		
Cracked Ice	Matte	Smooth
Available Colors		
Bright White	Pewter White	Almond

Physical Properties:

TEST	METHOD	VALUE
Flame Spread	ASTM E-84	Class C
Insulation Value	ASTM C-518	R Value = 3
Moisture Absorption (7 days)	ASTM D-570	0.055%
Heat Deflection Temperature	ASTM D-648	174°F @ 66psi Load
Compressive Strength	ASTM D-695	11840+/- 1191 lbs/inch
Coefficient of Lineal Thermal Expansion	ASTM D-696	5.94x10 ⁻⁵ in./in./°C
Flexural Modulus	ASTM D-790 Method B-1	31026+/- 2988 psi
Environmental Aging — 3 cycles	ASTM D-1183	Pass—no change
Shore Hardness (D scale)	ASTM D-2240	76
Dart Drop	ASTM D-3029	32 inch pounds

Codes

USDA compliant - incidental contact
 FDA: 1999 Food Code 6-101.11
 California - Proposition 65

Environmental Data

PLAS-TEX® is made from 100% recycled resins. DURO-THERM can be recycled as #7. Cut-off and saw dust from installation can be disposed of as one would lumber chips or other non-toxic material.

Where to Purchase

This product can be purchased directly from Parkland Plastics. Lead time is stock to 3 weeks. Cost depends upon the thickness of the PLAS-TEX laminate and the substrate selected.