

Technical Data Sheet

DESCRIPTION

Perma-Deck® Advantage+ is made of thermoplastic polymers, foaming agents, UV-stabilized pigments and chosen process additives.

The thermoplastic polymers included in Perma-Deck® Advantage+ come from post-consumer and post-industrial sources. Post-consumer material includes rigid plastic, such as high-density polyethylene (HDPE # 2) and low-density polyethylene (LDPE # 4) and polypropylene (PP # 5). The post-industrial material includes flexible plastic film such as cut-outs from plastic bag manufacturers. This material is then compounded and extruded into a very dense and rigid board containing 100% recycled plastic.

Because Perma-Deck® Advantage+ is made of thermoplastic polymers (100% recycled plastic), it is extremely resistant to chemical products, oil, mold and mildew, de-icers and insects. It does not absorb moisture; therefore, will not crack, rot or splinter.

Perma-Deck® Advantage+ is manufactured in dimensional lumber sized boards; square edge and tongue & groove. The boards come in a variety of colors.

MAIN USES

Perma-Deck® Advantage+ is a solution for exterior applications where no-maintenance and weathering resistance is required such as decks, porches and balconies for residential, municipal and commercial applications.

PHYSICAL PROPERTIES	Method	Value
Flexural Properties:		
Flexural Strength	ASTM D6109	3,489 psi
Modulus of Elasticity	ASTM D6109	167,146 psi
Compressive Properties:		
Compressive Strength	ASTM D6108	1,773 psi
Modulus of Elasticity	ASTM D6108	117,835 psi
Coefficient Linear Thermal Expansion	ASTM D6341	0.0000896 in/in/°c
Static Coefficient of Friction Rubber Shoe Sole	ASTM D2394	Longitudinal: 0.538 Transverse: 0.622
Kinetic Coefficient of Friction Rubber Shoe Sole	ASTM D2394	Longitudinal: 0.622 Transverse: 0.643
Density (Specific Gravity)	ASTM D6111	.035 lbs/cu in
Water Absorption	ASTM D1037	< 0.01 %
Screw Withdrawal #10, 2 1/2"	ASTM D6117	1,158 lbs

DESIGN CONSIDERATIONS

Because plastic lumber boards are more flexible than wood, Perma-Deck® Advantage+ is not intended for use as load-bearing members such as posts, joists, stringers or beams.

When designing for decking or flooring with Perma-Deck® Advantage+, joist spacing is a very important point to consider. The following tables give the joist spans vs. allowable Live Loads and/or Concentrated Loads.

ALLOWABLE LIVE LOAD (PSF) at 70°F			
Maximum Deflection	12" span	16" span	20" span
15/16 x 6 Perma-Deck® Board			
L/360	818	345	177
L/240	1,226	517	265
L/180	1,635	690	353
2 x 6 Perma-Deck® Board			
L/360	1,204	508	260
L/240	1,805	762	390
L/180	2,407	1,016	520

CONCENTRATED LIVE LOADS (LBS) at 70°F			
Maximum Deflection	12" span	16" span	20" span
15/16 x 6 Perma-Deck® Board			
L/240 instant	266	153	99
L/180 long term	150	100	80
2 x 6 perma-deck® Board			
L/240 instant	375	217	141
L/180 long term	400	210	140

INSTALLATION

Perma-Deck® Advantage+ can be cut, drilled, mitered and installed with conventional wood working tools. Carbide tipped saw blades are suggested. #10 stainless steel flat-head wood screws are recommended as fasteners. Pre-drill 1/4" hole. Install one screw at each joist, on one edge of the board and alternating to the other edge, put two screws at each end of the board. Fasteners should be placed no closer than 3/4" from any edge of the board. Conversely, when installing decking, use hidden deck fastener system along with double groove deck boards.

Consideration should be given to expansion and contraction; gaps should be provided between the boards when installing Perma-Deck® Advantage+. As an example, a Perma-Deck® Advantage+ 10' board will expand or contract 1/8" over a 10°C temperature change. See Coefficient of Linear Thermal Expansion in Physical Properties table.



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25-YEAR LIMITED WARRANTY

RE-PLAST PRODUCTS claims no liability for the improper installation as described in this document.

Advantage +

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DIMENSIONS

Perma-Deck® Advantage+ is manufactured in the following lumber sizes:

NOMINAL DIMENSIONS	ACTUAL DIMENSIONS
15/16" x 6"	15/16" x 5-1/2"
2" x 3"	1-7/16" x 2-7/16"
2" x 4"	1-7/16" x 3-3/8"
2" x 6"	1-7/16" x 5-3/8"
2" x 10"	1-7/16" x 9-3/8"

WARRANTY

Perma-Deck® Advantage+ comes with a 25-Year Limited Warranty. The product is warranted to not rot, split, crack or splinter during this period. If the material does not perform as stated it will be replaced.

MAINTENANCE & CLEANING

Perma-Deck® Advantage+ is not affected by most chemical products and does not absorb moisture. To keep the original finish, clean it with mild soap and water. PERMA-DECK® is a low-maintenance product that requires no painting, no staining and no sealing.

Perma-Deck® Advantage+ offers maximum durability and excellent weathering resistance; however, as with other polyolefin-based materials, it is possible that the material will fade slightly over the life of the product. This will not impair the product's performance.

OTHER INFORMATION

Perma-Deck® Advantage+ has been tested, for UV exposure, extreme temperatures and hygrothermal cycled exposure (freeze/thaw) as per ASTM test methods and proven to retain its performance characteristics.

Perma-Deck® Advantage+ has been tested by Underwriter's Laboratories to determine the surface burning characteristics of the material (flame spread index) in accordance with ASTM Test Methods. The product has a melting point temperature of approximately 280°F and a flash point temperature of approximately 645°F.



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1350, chemin Quatre-Saisons, Notre-Dame-du-Bon-Conseil (Quebec) Canada J0C 1A0
Phone : 819 336-2440 | Fax : 819 336-2442 | www.replastproducts.com

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