

ICC-ES Evaluation Report

ESR-3160

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<p>DIVISION: 06 00 00— WOOD, PLASTICS AND COMPOSITES</p> <p>Section: 06 50 00— Structural Plastics</p>	<p>REPORT HOLDER: INTEPLAST GROUP CORPORATION</p> <p>ADDITIONAL LISTEES: THE WOLF ORGANIZATION, LLC</p> <p>PRODUCT NAMES: WOLF BUILDERS MARK TRIM™ (INTEPLAST BUILDING PRODUCTS TRIM CELUKA) AND WOLF PVC TRIMBOARDS (INTEPLAST BUILDING PRODUCTS TRIM FREE FOAM) MATERIALS AVAILABLE IN MILLWORK, MOULDING, AND SHEET PRODUCTS</p> <p>SRS DISTRIBUTION</p> <p>PRODUCT NAMES: TOPSHIELD PVC TRIM (INTEPLAST BUILDING PRODUCTS TRIM FREE FOAM, INTEPLAST BUILDING PRODUCTS MILLWORK) AND TOPSHIELD MOULDING (INTEPLAST BUILDING PRODUCTS MOULDING)</p>	<p>EVALUATION SUBJECT: INTEPLAST BUILDING PRODUCTS TRIM FREE FOAM (INTEPLAST® TRIM FREE FOAM); INTEPLAST BUILDING PRODUCTS TRIM CELUKA (INTEPLAST® TRIM CELUKA); INTEPLAST BUILDING PRODUCTS COMPOSITE (INTEPLAST® TRIM COMPOSITE); INTEPLAST BUILDING PRODUCTS MILLWORK (INTEPLAST® MILLWORK); INTEPLAST BUILDING PRODUCTS MOULDING (INTEPLAST® MOULDING); INTEPLAST BUILDING PRODUCTS SHEET (INTEPLAST® SHEET) PRODUCTS</p>	
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2012 and 2009 [International Building Code® \(IBC\)](#)
- 2012 and 2009 [International Residential Code® \(IRC\)](#)
- 2013 *Abu Dhabi International Building Code (ADIBC)*†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Weather resistance

- Termite resistance
- Surface burning characteristics
- Negative transverse wind loads

2.0 USES

Inteplast Building Products Trim Free Foam (Inteplast® Trim Free Foam), Inteplast Building Products Trim Celuka (Inteplast® Trim Celuka), Inteplast Building Products Trim Composite (Inteplast® Trim Composite), Inteplast Building Products Millwork (Inteplast® Millwork), Inteplast Building Products Moulding (Inteplast® Moulding), and Inteplast Building Products Sheet (Inteplast® Sheet) products are used as nonload-bearing exterior and interior trim when the product sizes comply with and is installed per IBC Section 2604.2 and IRC Section R316.5.9.

3.0 DESCRIPTION

3.1 General:

Inteplast® TRIM products include: Inteplast Building Products Trim Free Foam (Inteplast® Trim Free Foam), Inteplast Building Products Trim Celuka (Inteplast® Trim Celuka), Inteplast Building Products Trim Composite (Inteplast® Trim Composite), Inteplast Building Products Millwork (Inteplast® Millwork), Inteplast Building Products Moulding (Inteplast® Moulding), and Inteplast Building Products Sheet (Inteplast® Sheet). The materials are rigid cellular PVC (polyvinyl chloride) with solid cross sections. The raw materials used for manufacturing the materials are PVC resin, additives, chemical foaming agents, fillers, pigments, and reground finished material, and may include wood powder.

Inteplast® TRIM products can be cut, shaped, routed and mitered with standard woodworking tools. Inteplast® TRIM products are available in wood grain (WG), matte (MT), or smooth (SM) finishes. See [Tables 3, 4, and 5](#) for availability.

3.2 Materials:

Inteplast® TRIM products are manufactured from the following materials as described in Sections 3.2.1 to 3.2.3.

3.2.1 Inteplast® Free Foam: Inteplast® Free Foam is PVC foamed by free expansion. It is white in color.

3.2.2 Inteplast® Celuka: Inteplast® Celuka is PVC foamed by controlled internal expansion. Due to the controlled expansions, Inteplast® Celuka has an integral hard skin. It is white in color.

3.2.3 Inteplast® Composite: Inteplast® Composite is a mixture of wood composite and PVC foam. Inteplast® Composite is PVC foamed by controlled internal expansion. Due to controlled expansion, Inteplast® Composite has an integral hard skin. It is tan in color.

3.3 Surface Burning Characteristics:

Inteplast® TRIM Free Foam and Inteplast® TRIM Celuka at the maximum product thickness (actual thickness) of 1 inch (25.4 mm) and Inteplast® TRIM Composite at the maximum product thickness (actual thickness) of 3/4 inch (19.1 mm) have a flame spread index no greater than 75 when tested in accordance with ASTM E84.

4.0 DESIGN AND INSTALLATION

4.1 General:

Inteplast® TRIM products must be installed according to the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation. The instructions within this report must govern if there are any conflicts between the manufacturer's published installation instructions and this report.

4.2 Allowable Span:

The Inteplast® TRIM products listed in [Table 3](#) through [5](#) of this report are limited to a maximum spacing of 16 inches (406 mm) on center.

4.3 Fasteners:

Fasteners must be a minimum of 8d common nails, stainless steel or hot-dipped galvanized, with a minimum shank diameter of 0.12 inch (3.05 mm). Fasteners must penetrate into flat, solid wood substrate or a framing member a minimum of 1 3/8 inches (34.9 mm). Two fasteners per framing member must be installed a minimum of 3/4 inch (19.1 mm) from the edges and a maximum of 2 inches (50.8 mm) from the end of Inteplast® TRIM products. Fastener spacing must never exceed 16 inches (406 mm) along the length nor 10 1/2 inches (267 mm) along the width of a member. Predrilling is required when temperatures are below 32°F (0°C) and when larger fasteners are used.

4.4 Temperature Changes—Expansion and Contraction:

To allow for expansion and contraction, $\frac{1}{8}$ inch (3.18 mm) of space must be provided between the end of Inteplast® TRIM products and any solid substrates.

4.5 Wind Load Assemblies Using Inteplast® Trim:

Inteplast® TRIM products must be installed on minimum 2-by-8, No. 2 grade, spruce-pine-fir (SPF) spaced at a maximum of 16 inches (406 mm) on center. Inteplast® TRIM products must be placed with the long direction perpendicular to the wood framing. Fasteners must be a minimum of 8d round headed Bostitch® framing stick nails, stainless steel or hot-dipped galvanized, with a minimum shank diameter of 0.12 inch (3.05 mm). Fasteners are installed approximately $\frac{3}{4}$ inch (19.1 mm) from edges. Installation of fasteners must be at a maximum spacing of 16 inches (406 mm) in the long direction and $10\frac{1}{2}$ inches (267 mm) in the short direction.

Installation of Inteplast® TRIM products made from Inteplast® TRIM Free Foam and Inteplast® TRIM Celuka products is limited to a maximum thickness of 1 inch (25.4 mm). The minimum length of fasteners must be $2\frac{3}{8}$ inches (60.3 mm) and the minimum embedment depth must be $1\frac{3}{8}$ inches (34.9 mm).

Installation of Inteplast® TRIM products made from Inteplast® TRIM Composite is limited to a maximum thickness of $\frac{3}{4}$ inch (19.1 mm). Fasteners must be at least $2\frac{3}{8}$ inches (60.3 mm) long and must have a minimum embedment depth of $1\frac{3}{8}$ inches (34.9 mm).

The allowable design negative pressure of Inteplast® TRIM products installed as flat trim sheets assembled in accordance with this section (Section 4.5) is 59 psf (2.82 kN/m²).

5.0 CONDITIONS OF USE:

Inteplast® TRIM products described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.
- 5.2 Exterior trim must be limited to the following construction types:
 - Nonload-bearing exterior trim on buildings of Type VB construction under the IBC.
 - All buildings permitted under the IRC.
- 5.3 Exterior trim must be installed over solid backing material, such as approved exterior sheathing covered with an approved water-resistant barrier or approved exterior wall covering.
- 5.4 Interior trim must not be used in plenums per IBC Section 2603.7.
- 5.5 The Inteplast® TRIM products are produced under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Rigid Cellular PVC Nonload-bearing Exterior Trim \(AC227\)](#), dated December 2004 (editorially revised June 2012).

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-3160) along with the name, registered trademark, or registered logo of the report holder (Inteplast Group Corporation) or additional listee (The Wolf Organization, LLC. or SRS Distribution) must be included in the product label.
- 7.2 In addition, each package of Inteplast TRIM products, Wolf products or TopShield products (see [Table 2](#)) described in this report is marked with the address of the report holder or additional listee, and the product name (see [Table 1](#)).
- 7.3 The report holder's contact information is the following:

INTEPLAST GROUP CORPORATION
9 PEACH TREE HILL ROAD
LIVINGSTON, NEW JERSEY 07039
(973) 994-8027
www.inteplast.com

- 7.4 The Additional Listee's contact information is the following:

THE WOLF ORGANIZATION, LLC
20 WEST MARKET STREET
YORK, PENNSYLVANIA 17401
(877) 315-6669
www.wolfleader.com

SRS DISTRIBUTION
7440 SOUTH HIGHWAY 121
MCKINNEY, TEXAS 75070
(469) 421-0616
www.topshieldproducts.com

TABLE 1—PRODUCT IDENTIFICATION

PRODUCT NAME	PRODUCT NAME (SHORTHANDED)	PRODUCT LABEL
Inteplast Building Products Trim Free Foam	Inteplast® Trim Free Foam	Inteplast® Trim FF
Inteplast Building Products Trim Celuka	Inteplast® Trim Celuka	Inteplast® Trim CK
Inteplast Building Products Trim Composite	Inteplast® Trim Composite	Inteplast® Trim CP
Inteplast Building Products Millwork	Inteplast® Millwork	Refer to Table 3 Product Designation
Inteplast Building Products Moulding	Inteplast® Moulding	Refer to Table 4 Product Designation
Inteplast Building Products Sheet	Inteplast® Sheet	Refer to Table 5 Product

TABLE 2—CORRELATION OF PRODUCT NAMES

INTEPLAST GROUP CORPORATION	THE WOLF ORGANIZATION, LLC		
	PRODUCT NAME	PRODUCT NAME (SHORTHANDED)	PRODUCT LABEL
Inteplast Building Products Trim Celuka	Wolf Builders Mark Trim™	—	Wolf Builders Mark Trim™
Inteplast Building Products Trim Free Foam	Wolf PVC Trimboards	Wolf Trim	Wolf Trim
INTEPLAST GROUP CORPORATION	SRS DISTRIBUTION		
	PRODUCT NAME	PRODUCT NAME (SHORTHANDED)	PRODUCT LABEL
Inteplast Building Products Trim Free Foam	TopShield PVC Trim	—	TopShield PVC Trim
Inteplast Building Products Millwork		—	TopShield PVC Trim
Inteplast Building Products Moulding	TopShield Moulding	—	TopShield Moulding

TABLE 3—INTEPLAST® SHEET PRODUCTS^{1,2}

PRODUCT DESIGNATION			PRODUCT DIMENSIONS		
BASIC INTEPLAST PRODUCT	MATERIAL	FINISH	THICKNESS (inch)	WIDTHS (inches)	LENGTH (feet)
Trim	Free Foam (FF), Celuka (CK), or Composite (CP)	Wood Grain (WG), Smooth (SM), Matte (MT)	⁵ / ₈ (⁵ / ₈)	2 (1 ¹ / ₂), 3 (2 ¹ / ₂), 4 (3 ¹ / ₂), 5 (4 ¹ / ₂), 6 (5 ¹ / ₂), 8 (7 ¹ / ₄), 10 (9 ¹ / ₄), 12 (11 ¹ / ₄)	18
			1 (³ / ₄)		
			⁵ / ₄ (1)		
Sheet	Free Foam (FF), Celuka (CK), or Composite (CP)	Wood Grain (WG), Smooth (SM), Matte (MT)	³ / ₈ (³ / ₈)	48 (48)	8, 12
			¹ / ₂ (¹ / ₂)		
			⁵ / ₈ (⁵ / ₈)	48 (48)	8, 12, 18
			³ / ₄ (³ / ₄)	48 (48)	8, 12, 16, 18, 20
			1 (1)		

For SI: 1 inch = 25.4mm.

¹Actual sizes listed in parentheses.

²See manufacturer's literature for product shapes.

TABLE 4—INTEPLAST® MILLWORK PRODUCTS ^{1,2}

PRODUCT DESIGNATION			PRODUCT DIMENSIONS		
BASIC INTEPLAST PRODUCT	MATERIAL	FINISH	THICKNESS (inch)	WIDTHS (inches)	LENGTH (feet)
Beadboard	Free Foam (FF) or Celuka (CK)	Smooth (SM), Matte (MT)	1/2 (1/2)	6 (5 1/2)	18
			5/8 (5/8)	4 (3 1/2)	
Window Surround	Celuka (CK)	Wood Grain (WG)	5/4 (1)	4 (3 1/2)	18
				6 (5 1/2)	
Corner Board	Free Foam (FF) or Celuka (CK)	Wood Grain (WG), Smooth (SM), Matte (MT)	5/4 (1)	4x4 (3 1/2x3 1/2)	10,20
				6x6 (5 1/2x5 1/2)	
J-Channel	Free Foam (FF) or Celuka (CK)	Wood Grain (WG)	5/4 (1)	4x4 (3 1/2x3 1/2)	10,20
				6x6 (5 1/2x5 1/2)	
Starter Board	Free Foam (FF) or Celuka (CK)	Wood Grain (WG)	5/4 (1)	4 (3 1/2)	18
				6 (5 1/2)	
				8 (7 1/4)	
				10 (9 1/4)	

For SI: 1 inch = 25.4mm.

¹Actual sizes listed in parentheses.

²See manufacturer's literature for product shapes.

TABLE 5—INTEPLAST® MOULDING PRODUCTS ^{1,2}

PRODUCT DESIGNATION	PRODUCT DIMENSIONS		
	THICKNESS (inches)	WIDTH (inches)	LENGTH (feet)
4" Crown	9/16	3 5/8	18
5" Crown	11/16	4 5/8	
Base Board	11/16	2 5/8	18
Chair Rail	11/16	2 5/8	18
Brick Mold	1 1/4	2	7,18
Thermo	7/16	2	7,18
Drip Cap	11/16	1 5/8	18
Historic Sill	1 3/4	2 1/32	18
Planking	1/4	7 1/2	7,8
Base Cap	11/16	1 1/8	18
Bed Moulding	9/16	1 3/4	18
Quarter Round	3/4	3/4	18
Scotia	3/4	3/4	18
Door Jamb	1 1/4	4 9/16	7,8
Garage Door Jamb	1 3/16	5 1/2	7,8,9,16
	1 3/16	7 1/2	

For SI: 1 inch = 25.4 mm

¹See manufacturer's literature for product shapes.

²Moulding products are only available in Free Foam.