

# HALO® INTERRA MATERIAL PROPERTY DATA SHEET

rev.020419

## PRODUCT NAME

Halo® Interra® - The Advanced Reflective Interior Rigid Insulation.

## MANUFACTURER

- Beaver Plastics Ltd.  
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- AMC Foam Technologies Inc.  
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- Form Solutions  
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888-706-7709
- Progressive Foam Technologies  
1 Southern Gateway Dr.  
Gnadenhutten, OH, 44629  
800-860-3626
- Perma R Products Inc.  
2604 Sunset Dr.  
Grenada, MS, 38901  
800-647-6130
- Perma R Products Inc.  
106 Perma R Rd.  
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800-647-6130

## PRODUCT DESCRIPTION

Halo Interra products are rigid foam sheathing insulation made from GPS (graphite infused expanded polystyrene).

Halo Interra is coated with a reflective laminate on both sides of the rigid insulation.

Halo Interra acts as a vapor barrier while providing continuous insulation. In addition, when a sealed air gap between the reflective laminate surface and covering is provided an additional boost in R-value is provided.

**Table 1: Halo Interra Applications**

Application	Interra
Roof	x
Ceiling	x
Interior above-grade wall	x
Interior foundation wall	x
Above slab	x

## BASIC USE

Halo Interra is suitable for use in residential, multi-residential, commercial, and industrial buildings.

Halo Interra is designed to seal and insulate specific walls, ceilings and floors of a building, as shown in Table 1.

## STANDARDS

- ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- ASTM C518 – Standard Test Method for Steady-state Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
- ASTM D1622 – Standard Test Method for Apparent Density of Rigid Cellular Plastics.
- ASTM D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics.
- ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.
- ASTM C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation.
- ASTM C303 – Standard Test Method for Dimensions and Density of Preformed Block and Board-Type Thermal Insulation.
- ASTM D2863 – Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index).
- ASTM E2178 - Standard Test Method for Air Permeance of Building Materials.
- CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- CAN/ULC S102.2 - Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies.
- NFPA 286 “Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth”.

## CODE EVALUATION APPROVALS

- CCMC 14004-L
- QAI Listing B1031-2

## PHYSICAL PROPERTIES

Halo Interra conforms to the physical properties shown in Tables 2, 3, 4 and 5.

## ENVIRONMENTAL DATA

Halo Interra is produced without the use of chlorofluorocarbon (CFCs), hydrochlorofluorocarbon (HCFCs) or formaldehyde. As a result, Halo Interra will not produce harmful emissions to the environment.

BASF Neopor Plus is recognized as a product that produces low chemical emissions by the Greenguard Environment Institute – Neopor Plus is Greenguard Indoor Air Quality Certified® and Greenguard Children & Schools<sup>SM</sup> Certified product.

## FIRE INFORMATION

Halo Interra products are made of combustible materials and may need to be protected from high heat sources. In addition, a thermal barrier may be required when used in the interior of a building. Refer to your local building codes for appropriate protection and thermal barrier requirements.

## INSTALLATION

Halo Interra products are light weight, which makes them easy to handle, cut, and install.

A minimal number of fasteners is required to tack Interra sheets in place – the attachment of drywall, or strapping will fully secure Interra sheets.

Fasten Interra at the corner edges. The top of the fasteners should be flush to the surface of Interra.

### Typical Fastener Types

- Plastic cap nails,
- roofing nails with at least ½” diameter washers,
- cap staples,
- or wood screws with metal roof washers.
- When fastening to metal studs use screws with at least 1” diameter metal washers.

For detailed installation instructions, fastening Interra, including attachments of cladding or wood strapping refer to the Halo Installation Guide.

## PRODUCT SIZES

Halo Interra sheathing are available in 4x8 sheets, 5/8”, 1”, 1.5 and 2” thick. Custom sizes are available. Contact your local Halo representative for more information.

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THE ADVANCED RIGID INSULATION ENVELOPE

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**Table 2: Thermal Insulation<sup>1</sup>**

Product	R-value @ 75°F (RSI @ 24°C) <sup>2</sup>	R-value @ 40°F (RSI @ 4.4°C) <sup>2</sup>
Halo Interra	5 (0.88)	5.2 (0.92)

- In accordance with ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation", and CAN/ULC S701, "Standard For Thermal Insulation, Polystyrene, Boards and Pipe Covering", at 75°F (24°C), and at 40°F (4.4°C) from data provided by BASF. R-value of GPS increases as temperature decreases.
- At 1" nominal thickness (actual thickness = 1.06").

**Table 3: Material Properties**

ASTM C578 <sup>1</sup>	Halo Interra Type I
Compressive Resistance at 10% def., Min., psi (ASTM D1621)	10
Flexural Resistance Min., psi (ASTM C203)	25
Water Vapor Permeance Max., perms (ASTM E96)	0.03 <sup>2</sup>
Water Absorption Max., % (ASTM C272)	1.1
Dimensional Stability Max., % (ASTM D2126)	2
Oxygen Index Min., % (ASTM D2863)	24

CAN/ULC S701 <sup>1</sup>	Halo Interra Type 1
Compressive Resistance at 10% def., Min., kPa (ASTM D1621)	70
Flexural Resistance Min., kPa (ASTM C203)	170
Water Vapor Permeance Max., ng/Pa-s-m <sup>2</sup> (ASTM E96)	1.7 <sup>2</sup>
Water Absorption Max., % (ASTM C272)	1.1
Dimensional Stability Max., % (ASTM D2126)	1.5
Oxygen Index Min., % (ASTM D2863)	24

- Unless noted otherwise, properties are based on 1" thickness without laminate by data provided by BASF.
- Based on independent testing conducted by QAI. Water vapor permeance properties tested with laminate and 1" thick GPS.
- Contact your local Halo representative for availability.

**Table 4: Surface Burning Characteristics**

	Flame Spread Index Max.	Smoke Developed Index Max.	Thickness Max.	Density
ASTM E84	5	25	5 in.	2 pcf
CAN/ULC S102.2	230	> 500	102 mm	32 kg/m <sup>3</sup>

**Table 5: Additional Properties**

	Results
Air Leakage, per ASTM E2178	0.0010 L/s-m <sup>2</sup> at 1" thickness Complies as an air barrier in accordance with the National Building Code of Canada and the International Residential Code