PARATHERM & PARATHERM CG POLYISOCYANURATE INSULATION

Commercial Product Data Sheet

Product Description

Paratherm and Paratherm CG are rigid roof insulation boards comprised of a closed cell polyisocyanurate foam core bonded on each side to a fiber-reinforced organic felt facer (Paratherm) or a coated fiberglass facer (Paratherm CG). Paratherm is available in 20 psi (Grade 2) and 25 psi (Grade 3) variants.

Product Uses

Paratherm is typically used in combination with coverboards approved in advance by Siplast for all constructions requiring a single-source guarantee. Each panel of Paratherm must be secured to the roof deck with Factory Mutual Approved fasteners (appropriate to the deck type) and plates installed in accordance with current FM requirements. Alternatively, maximum 4 ft x 4 ft (1.22 m x 1.22 m) panels of Paratherm may be adhered to a prepared existing concrete deck with a full mopping of hot asphalt or approved insulation adhesive. Paratherm CG (coated fiberglass facer - non-organic) is required over new concrete substrates due to the anticipated high moisture content. This includes all layers where multiple layers of Paratherm are used. See the Siplast Base Sheet & Rigid Insulation Usage Guide @ www.Siplast.com for usage guidelines.

Product Approvals

Paratherm meets or exceeds the requirements of ASTM C1289 Type II, Class 1, Grade 2. Paratherm CG meets or exceeds ASTM C 1289 Type II Class 2, Grade 2 requirements. Grade 3 product (25 psi) is also available. Paratherm is Factory Mutual Approved for use in Class 1 constructions when installed according to FM requirements. Paratherm has been classified by Underwriters Laboratories, and Underwriters Laboratories Canada as an approved roof insulation.

Panel Dimensions - Flat Panels: Available in 4' x 8' (1.22 m x 2.43 m) and 4' x 4' (1.22 m x 1.22 m) panels. Panel thickness ranges from 1 inch (2.54 cm) to 4 inches (10.16 cm).

Panel Dimensions - Tapered Panels: Available in 4' x 4' (1.22 m x 1.22 m) panels. Panel thickness varies with taper/slope of the panel. Tapered panels are available to provide 1/8, 1/4, or 1/2 inch per foot slope.

Multiple Layer Configurations: A maximum individual flat-stock panel thickness of 2.7 inches is recommended. For configurations requiring more than 2.7 inches of Paratherm, a multiple layer configuration is recommended.

Packaging:
Paratherm products are protected by a plastic wrap, plastic bag, or both. This factory packaging is intended for handling the Paratherm in the manufacturing plant and during transit; it should not be relied upon as job site protection from the elements.

Storage & Handling:
Material delivery should be carefully coordinated with the schedule for roofing operations to minimize job site storage time. Upon delivery, the factory packaging should be removed or slit on all four sides to allow for ventilation and to prevent the accumulation of condensation. Interior storage offering dry, well-ventilated conditions should be considered when the product is to be stored for more than 14 days prior to installation. When short-term job site storage is necessary, Paratherm should be stored flat on raised pallets or platforms at least 4 inches above the ground. Pallets should be stored on a finished surface rather than on dirt or grass to avoid upward transpiration of moisture. Pallets should be covered with a breathable, waterproof covering in all cases.

PHYSICAL/MECHANICAL PROPERTIES

Property	Test Method	Value
Dimensional Stability*	ASTM D2126	<2%
Compressive Strength	ASTM D1621	Grade 2 (20 psi) Grade 3 (25 psi)
Water Absorption	ASTM D209	<1.5%
Tensile Strength	ASTM C209	≥500 psf
Service Temperature	N/A	-100°F to 200°F
Moisture Vapor Transmission	ASTM E96 (Procedure. A)	<1.5 perm
Mold Resistance (Paratherm CG)	ASTM D3273	Pass

*Percentage change (7 days @ 158°F [70°C] 97% RH).

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Nominal Thickness inch (mm)	LTTR* ASTM C1289-11 (CAN/ULC-S770 -09)	LTTR** (CAN/ULC-S770 -03)	Flute Span (max.) inch (mm)
1.0 (25)	5.6	6.0	2-5/8 (67)
1.2 (30)	6.7	7.2	2-5/8 (67)
1.5 (38)	8.5	9.0	3-3/8 (86)
1.8 (46)	10.2	10.9	3-3/8 (86)
2.0 (51)	11.4	12.1	3-3/8 (86)
2.2 (56)	12.6	13.4	3-3/8 (86)
2.3 (58)	13.2	14.0	3-5/8 (92)
2.5 (64)	14.4	15.3	3-5/8 (92)
2.6 (66)	15.0	15.9	3-5/8 (92)
2.7 (69)	15.6	16.6	3-5/8 (92)
The following are not recommended for use in a single layer application.			
2.8 (71)	16.2	17.2	3 5/8 (92)
3.0 (76)	17.4	18.5	3 5/8 (92)
3.1 (78)	18.0	19.1	3 5/8 (92)
3.2 (81)	18.6	19.8	3 5/8 (92)
3.5 (89)	20.5	21.7	3 5/8 (92)
3.8 (97)	22.3	23.7	3 5/8 (92)
4.0 (102)	23.6	25.0	3 5/8 (92)

* Long-term Thermal Resistance (LTTR) Value determined in conformance with ASTM C1289-11 effective Jan. 1, 2014 (CAN/ULC-S770 -09).

** Long-term Thermal Resistance (LTTR) Values determined in conformance with CAN/ULC-S770-03.

Information on other thicknesses is available upon request.

COMMON THERMAL VALUE COMBINATIONS

LTTR	ASTM C1289-11 (CAN/ULC-S770 -09)
20.4	two layers of 1.8" Paratherm or Paratherm CG
25.2	two layers of 2.2" Paratherm or Paratherm CG
30	two layers of 2.6" Paratherm or Paratherm CG
35.4	one layer of 3.1” plus one layer of 3" Paratherm or Paratherm CG
41	2 layers of 3.5" Paratherm or Paratherm CG

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