Siplast Polyiso

ASTM C1289 Polyiso Roofing Insulation Classifications*

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Understanding the ASTM

Understanding the ASTM (American Society for Testing and Materials) standard is key to understanding and evaluating GAF polyiso products. ASTM C1289 is the main standard used when evaluating polyiso physical properties. This specification covers the general requirements for faced thermal insulation boards. "Faced" means that boards composed of rigid cellular polyisocyanurate are surfaced (or faced) with other materials. ASTM compliant polyiso meets their test criteria accordingly.

ASTM C1289

Physical Property—Compressive Strength, psi (kPa), min

TYPE II - Class 1	TYPE II - Class 2	TYPE II - Class 4
Grade 1 16 psi	Grade 1 16 psi	Grade 1 80 psi
Grade 2 20 psi	Grade 2 20 psi	Grade 2 110 psi
Grade 3 25 psi	Grade 3 25 psi	Grade 3 140 psi

Type II — Faced with either cellulosic facers or glass fiber mat facers on both major surfaces (top and bottom) of the core foam

Class 1	Class 2	Class 4[2]
Glass fiber-reinforced cellulosic felt containing glass fibers (GRF)	Coated polymer bonded fibrous glass mats bonded with organic polymer binders and coated with organic polymer, clay, or other inorganic substances on both sides. (CGF)	Coated polymer bonded fibrous glass mats bonded with organic polymer binders and coated with organic polymer, clay, or other inorganic substances on both sides. (CGF)
Available in Grade 2 (20 psi) standard or Grade 3 (25 psi) Paratherm™ G Polyiso Insulation Paratherm™ G Tapered Polyiso Insulation Paratherm™ NH Polyiso Insulation Paratherm™ NH Tapered Polyiso Insulation	**Available in Grade 2 (20 psi) standard or Grade 3 (25 psi)** Paratherm™ G CG Polyiso Insulation Paratherm™ G CG Tapered Polyiso Insulation Paratherm™ NH CG Polyiso Insulation Paratherm™ NH CG Tapered Polyiso Insulation Paratherm™ Barrier Polyiso Insulation Paratherm™ NH Barrier Polyiso Insulation	**Grade 1, 80 psi min to 109 psi max** Paratherm™ HD Polyiso Cover Board Paratherm™ NH HD Polyiso Cover Board Paratherm™ HD Barrier Polyiso Cover Board

NOTE: Not all products are available at all manufacturing facilities.

[2] When evaluating the compressive strength of cover boards the ASTM recognizes them as follows, ASTM C1289 Type II Class 4, and they come in three grades.

ASTM compliance for compressive strength is achieved by meeting the minimum value. The table shows that "Grade 1" cover board falls between a minimum compressive strength of 80 psi and a maximum compressive strength of 109 psi. Some polyiso manufactures list their compressive strength as the maximum value of that Grade, for example Grade 1 as (109 psi max) on their literature. A board is in compliance as long as it is within the ASTM stated range - a minimum of 80 to a maximum of 109 for Grade 1, and a minimum of 110 to a maximum of 139 for Grade 2.

A composite cover board is categorized by ASTM by the two types of components that are used in the assembly of the product. Ex: Paratherm ™ HD Composite Insulation is comprised of Paratherm ™ HD (ASTM C1289 Type II Class 4 Grade 1), and Parathem ™ G CG (ASTM C1289 Type II Class II Grade 2).