



HUNTER
CONTINUOUS INSULATION

Hunter Xci Tech Topic #102

ASTM C 1289 Class 1 vs Class 2

Question: Is there a significant difference between ASTM C1289 Type I Class 1 and Class 2?

Polyisocyanurate Board Insulation: Aluminum-foil-faced, glass-fiber-reinforced, rigid, cellular, polyisocyanurate thermal insulation complying with ASTM C 1289, Type I, Class 2.

Answer: No

At Hunter Panels, it's our position that there is negligible difference between a Class 1 and Class 2 product. Although a Class 2 polyiso panel has a glass fiber reinforced foam core, where a Class 1 panel does not, there is no supporting data that shows any enhanced performance as a result of adding this glass fiber. Testing with ASTM C1289 standards shows that both Class 1 and Class 2 polyiso products meet the same overall performance criteria for thermal absorption, water absorption, water vapor transmission, strength and fire performance. Both products can provide compliance within NFPA 285 and NFPA 286 wall assemblies. Historically, certain manufacturers have used the Class 2 designation as part of their sales strategy to solidify their spec position.

Typical Physical Property Data Chart Based on Current Product Literature

		Product Comparison				
		Hunter Xci Class A	Dow Thermax™ (ci)	Hunter Xci Foil	Hunter Xci 286	Dow Thermax™ **
Property	Test Method	ASTM C 1289 Type I Class 1	ASTM C 1289 Type I Class 2	ASTM C 1289 Type I Class 1	ASTM C 1289 Type I Class 1	ASTM C 1289 Type I Class 2
Flame Spread Index foam core	ASTM E 84	< 25	< 25	< 75 ***	< 25	< 25
Smoke Developed foam core	ASTM E 84	< 250	< 450	< 450	< 250	< 450
Compressive Strength	ASTM D 1621	25 psi min.	25 psi min.	25 psi* available	25 psi min.	25 psi min.
Moisture Vapor Permeance	ASTM E 96	< 0.04 perm	<0.03 perm	<0.05 perm	< 0.3 perm	<0.03 perm
Water Absorption	ASTM C 209	< 0.05% volume	< 0.1% volume	< 0.05% volume	< 0.3% volume	< 0.1% volume
Service Temperature		-100° to 250° F (-73°C to 122°C)	-100° to 250° F (-73°C to 122°C)	-100° to 250° F (-73°C to 122°C)	-100° to 250° F (-73°C to 122°C)	-100° to 250° F (-73°C to 122°C)

*Also available in Grade 1 (16 psi) and Grade 2 (20 psi)

**Multiple products in this product line.

***Refer to Hunter Xci Tech Bulletin #104