KYDEX® THERMOPLASTIC SHEET

ASTM E-84 Classification for KYDEX® Thermoplastic Sheet

TB - 143

ASTM E-84 Classification

KYDEX sheet is often used as a building material and must therefore be subjected to the surface burning specification as outlined in ASTM E-84: Surface Burning Characteristics of Building Materials. Note: UL 723 and NFPA 255 are fundamentally the same test method as ASTM E-84 and are all often referred to as the "Tunnel Test".

The purpose of the test is to determine the comparative burning characteristics of a material by evaluating the spread of flame over its surface and the density of the smoke developed when exposed to a test fire, and consequently establish a basis on which surface burning characteristics of different materials may be compared without specific considerations of all the end-use parameters that might affect the surface burning characteristics.

The Flame-Spread Index (FSI) and Smoke-Developed Index (SDI) are numerical classifications based upon a standard surface burning test such as ASTM E-84. Flame spread is the ability for a flame to travel along the surface of a material away from the fire source while smoke developed is a measure of the concentration of smoke given off as a material burns. A low FSI indicates a low burn rate and a low SDI indicates a low smoke development rate.

The building, fire, and life safety codes (IBC, IFC, NFPA 5000, NFPA 101, and NFPA 1/UFC) all contain requirements that limit interior wall and ceiling finishes to 3 classes. The FSI and SDI obtained during the 10-minute test are used to classify materials from best (Class A or I), to moderate (Class B or II), to least (Class C or III), see details below.

Code Classification	Flame Spread Index	Smoke Developed Index
I or A	0-25	450
II or B	26-75	450
III or C	76-200	450

The following is a list of qualified KYDEX sheet products. The classification is good for the tested thickness and below.

Product	KYDEX® 152 WG	KYDEX® 110	KYDEX® 150	KYDEX® L	KYDEX® 160	KYDEX® 115	KYDEX® 150
Classification	Class I/A	Class I/A	Class I/A	Class I/A	Class I/A	Class I/A	Class II/B
Thickness	1.02mm (0.040")	1.52mm (0.060")	1.52mm (0.060")	1.02mm (0.040")	3.18mm (0.125")	2.03mm (0.080")	2.36mm (0.093")

For detailed information or results on KYDEX sheet products, please contact the Kleerdex Company, LLC.

Kleerdex Company, LLC

ISO 9001 and ISO 14001 Certified

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This information supersedes all previously published data.

