

TECHNICAL NOTE #102

HD-EPS INSULATION TECHNICAL DATA

Physical Properties of High Density EPS Insulation
Specification Reference: ASTM C578

Cellofoam® high density expanded polystyrene (HD-EPS) insulation is a rigid, foamed plastic with resilient closed cells molded in a range of densities and sizes to meet your application and specification requirements. Our HD-EPS is produced with modified bead containing a fire retardant and provides all of the characteristics required for long-term performance: permanent R-Value, inherent water resistance, excellent physical strength, and dimensional stability. Contains No CFC, HCFC or HFC.

Cellofoam® HD-EPS provides a high R-Value at a comparatively low cost, especially compared to XPS and ISO, making it the insulation choice for roof, exterior and interior wall, below grade, cold storage and other applications. Several laminated polymeric facer options are available for different applications. Formulations with insect/termite resistance are also available. Our EPS does not support mold or fungal growth.

Cellofoam® High Density EPS Properties^{1,2}	Units	25 PSI³	40 PSI	60 PSI
ASTM C578 TYPE		IX	XIV	XV
Compressive Resistance @ 10% def., min.	psi (kPa)	25 (173)	40 (276)	60 (414)
Density, min.	lb/ft ³ (kg/m ³)	1.8 (29)	2.4 (38.4)	3.0 (48.0)
Thermal Resistance of 1.0 in. thickness, min.	^o Fft ² h/Btu (^o Cm ² /W)			
at 40°F		4.6 (0.81)	4.6 (0.81)	4.7 (0.83)
at 75°F		4.2 (0.74)	4.2 (0.74)	4.3 (0.76)
Flexural Strength, min.	psi (kPa)	50 (345)	60 (414)	75 (517)
Water Vapor Permeance of 1.0 in. thickness, max. perm	ng/Pa·s·m ²	2.5	2.5	2.5
Water Absorption by total immersion, max.	volume %	2.0	2.0	2.0
Oxygen Index, min.	volume %	24.0	24.0	24.0
Flame Spread index		< 20	< 20	< 20
Smoke Developed Index		150-300	150-300	150-300
1. When tested in accordance with ASTM C578 Test Methods 2. All HD-EPS insulation manufactured by Cellofoam North America Inc. meet ASTM C578 standard specifications 3. UL Certified - See UL ER7260-01				

WARNING: This product is combustible and if exposed to a fire of sufficient heat and intensity may burn rapidly. It should not be left exposed or inadequately protected. Consult specific instructions and applicable building codes for use of this product.

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