



cellofoam®

EPS INSULATION TECHNICAL DATA

TYPICAL PHYSICAL PROPERTIES OF EPS INSULATION Specification Reference: ASTM-C578

Cellofoam EPS Insulation as manufactured by Cellofoam North America Inc is a modified expanded polystyrene. It is rigid, foamed plastic with resilient closed cells molded in a range of densities and sizes to meet your application specifications and requirements.

Cellofoam EPS provides all the characteristics required for long-term performance: permanent R value, inherent water resistance, excellent physical strength, and dimensional stability.

Cellofoam EPS provides a high R value at a comparatively low cost, making it the insulation choice for: Roof, Perimeter, Cold Storage, Exterior and Cavity Wall Insulation, Polyshield Fan-fold, Leveling Board and Non-Structural Sheathing.

Property	Units	ASTM Test	Type I	Type VIII	Type II	Type IX	
Density (Maximum)	pcf		1.0	1.25	1.5	2.0	
Density (Minimum)	pcf	C303 or D1622	0.90	1.15	1.35	1.80	
Thermal Conductivity K Factor	at 40F at 75F	BTU/(hr.) (sq. ft.)(F/in.)	C177 or C518	0.24 0.26	0.235 0.255	0.22 0.24	0.21 0.23
Thermal Resistance Values (R)*	at 40F at 75F	per inch	— —	4.17 3.85	4.25 3.92	4.55 4.17	4.76 4.35
Strength Properties							
Compressive 10% Deformation	psi	D1621	10-14	13-18	15-21	25-33	
Flexural	psi	C203	25-30	30-38	40-50	50-75	
Tensile	psi	D1623	16-20	17-21	18-22	23-27	
Shear	psi	D732	18-22	23-25	26-32	33-37	
Shear Modulus	psi	—	280-320	370-410	460-500	600-640	
Modulus of Elasticity	psi	—	180-220	250-310	320-360	460-500	
Moisture Resistance							
WVT	perm. in.	E96	2.0-5.0	1.5-3.5	1.0-3.5	0.6-2.0	
Absorption (vol.)	%	C272	less than 4.0	less than 3.0	less than 3.0	less than 2.0	
Capillarity	—	—	none	none	none	none	
Coefficient of Thermal Expansion	in./(in.)(F)	D696	0.000035	0.000035	0.000035	0.000035	
Maximum Service Temperature	°F	—					
Long-term			167	167	167	167	
Intermittent			180	180	180	180	
Oxygen Index	Minimum %	D2863	24.0	24.0	24.0	24.0	
Dimensional Stability	% Change	D2126	max. 2.0	max. 2.0	max. 2.0	max. 2.0	
Bond Strength, lb/ft² shear							
with Portland Cement			830	830	830	830	
with gypsum			510	510	510	510	
Sound Absorption							
		C423					
at 1000 cps			0.36	0.36	0.36	0.36	
at 2000 cps			0.54	0.54	0.54	0.54	
at 4000 cps			0.38	0.38	0.38	0.38	
Buoyancy, lb/ft³			60	60	60	60	
Toxicity		Laboratory Reports	Approximately the same as burning wood, paper or cardboard				
Fungus & Bacterial Resistance		F.H.A. Test Procedures	Will not support bacterial or fungus growth; no food value.				

*R' means resistance to heat flow. The higher the 'R' value, the greater the insulating power.

Advantages

- Available in a wide range of sizes
- Low material and insulation costs
- Can be obtained in various densities
- Easily stored, handled and installed
- Simple to cut and shape with common tools
- Clean, odorless, non-irritating skin
- Excellent bond with drywall and non-solvent type adhesives
- Provides an excellent surface for laminate base
- Perfect soil substitute in road construction

Characteristics

- Resists moisture penetration
- Effective over wide temperature range
- Low thermal conductivity
- High strength to weight ratio
- Reflective white color
- Does not support bacterial growth
- Mold resistant
- Resistant to most acids and alkalis

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 for use accompanying this product.

The performance data herein reflects Cellofoam North America Inc's expectation based on tests conducted in accordance with recognized standard methods. The sale of these products shall be subject to the Terms and Conditions of Sale, INCLUDING those LIMITING WARRANTIES as set forth in Cellofoam North America Inc's invoices. No agent, employee or representative of Cellofoam North America Inc or its subsidiary or affiliated companies is authorized to modify this disclaimer.

All EPS insulation products manufactured by Cellofoam North America Inc meet applicable standards including:

- ICC ESR-1820
 - IBC
 - IRC
 - UBC
- HUD/FHA Use of Material, Bulletin #71
 - ASTM C578
 - Underwriters Laboratories
 - Military Spec. MILP-19644C
 - Military Spec. MILP-40619A
 - Factory Mutual



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