



## EPS Insulation

EPS (Expanded Polystyrene) Insulation is a moisture resistant closed cell foam which contains no ozone depleting CFCs or HCFCs and is 100% recyclable.

EPS offers outstanding flexibility in design and is ideal for most construction needs, offering the best insulating value per dollar spent of any material available today. Additionally, its long-term insulation value is assured since aging has absolutely no effect upon performance.

### Features

- **Low Moisture Absorption:** Moisture absorption rates decrease as density increases, but are still minimal. Material thickness can increase moisture absorption performance.
- **Inert:** Experiences no physical or chemical breakdown over time. No nutrient value to animals, insects, organisms. No nutrient value to bacterial growth including mold.
- **No Leachates:** Will not contaminate the surrounding environment.
- **Design Flexibility:** Can be provided in various shapes and sizes as needed.

### Design Cautions

**Flammability:** EPS is combustible and should not be exposed to flame or other ignition sources. EPS should be covered with a thermal barrier or otherwise installed in accordance with applicable building code requirements.

**Solvent Damage:** EPS is susceptible to damage by petroleum based solvents and their vapors. Protect with vapor barrier covering and/or use compatible adhesives when applicable.

**Ultraviolet Damage:** Extended exposure to sunlight causes minor discoloration and surface dusting. Shield from direct sunlight for prolonged periods of time.

### Technical Data

Meets or exceeds physical and thermal property standards as established in ASTM C 578

Physical Properties	Units	ASTM Test	Type XI	Type I	Type VIII	Type II	Type IX	Type XIV
<b>Compressive Resistance at 10% Strain Deformation (2" cube)</b>	Min psi (kPa)	D 1621, C 165	5.0 (35)	10.0 (69)	13.0 (90)	15.0 (104)	25.0 (173)	40.0 (276)
<b>Flexural Strength</b>	Min psi (kPa)	C 203	10.0 (70)	25.0 (173)	30.0 (208)	35.0 (240)	50.0 (345)	75.0 (517)
<b>Thermal Resistance (R-Value)*</b> 75 ± 2° F (24 ± 1° C) 40 ± 2° F (4.4 ± 1° C)	Min R" for 1" thickness	C 177, C 518	3.1 (0.55) 3.3 (0.59)	3.85 (0.67) 4.17 (0.0)	3.92 (0.69) 4.25 (0.74)	4.17 (0.73) 4.55 (0.77)	4.35 (0.76) 4.76 (0.80)	4.2 (0.74) 4.6 (0.80)
<b>Thermal Conductivity (K-Value)*</b> 75 ± 2° F (24 ± 1° C) 40 ± 2° F (4.4 ± 1° C)	BTU/(hr) (Sq.Ft.) (F/in.)	C 177, C 518	0.323 (1.82) 0.303 (1.70)	0.260 (1.48) 0.240 (1.37)	0.255 (1.46) 0.235 (1.35)	0.240 (1.37) 0.220 (1.26)	0.230 (1.31) 0.210 (1.20)	0.238 (1.35) 0.217 (1.25)
<b>Coefficient of Thermal Expansion</b>	In./In.)(F)	D 696	0.000035	0.000035	0.000035	0.000035	0.000035	0.000035
<b>Moisture Resistance</b> <b>Water Absorption by total immersion</b>	% by volume Max	C 272	4.0	4.0	3.0	3.0	2.0	2.0
<b>Water Vapor Permeability of 1" (25.4 mm) thickness max perm</b>	Max perm/in (ng/Pa*s*m <sup>2</sup> )	E 96	5.0 (287)	5.0 (287)	3.5 (201)	3.5 (201)	2.0 (115)	2.5 (143)
<b>Oxygen Index</b>	Min volume %	D 2863	24.0	24.0	24.0	24.0	24.0	24.0
<b>Dimensional Stability (Change in dimensions)</b>	Max %	D 2126	2.0	2.0	2.0	2.0	2.0	2.0
<b>Max. Service Temperature Long Term / Intermittent</b>	F		167 / 180	167 / 180	167 / 180	167 / 180	167 / 180	167 / 180
<b>Flame Spread</b>		E84-81A	20	15 @ 6"	5 @ 4"	5 @ 4"	15 @ 4"	<25 @ 4" max
<b>Smoke Developed</b>		E84-81A	150-300	95-125	105-190	2-235	20-145	<450 @ 4" max
<b>Density, minimum</b>	Min lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	C 303	0.70 (12)	0.90 (15)	1.15 (18)	1.35 (22)	1.80 (29)	2.40 (38)
<b>Density, nominal</b>	lb/ft <sup>3</sup>		0.75	1.00	1.25	1.50	2.00	2.50

\*R means resistance to heat flow. The higher the R-Value, the greater the insulating power. Federal Trade Commission requires R-Value publication at 75° mean temperature of all insulations. Aged R-Values of alternate products should be compared to determine long-term benefit. Some insulations lose R-Value over time.



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