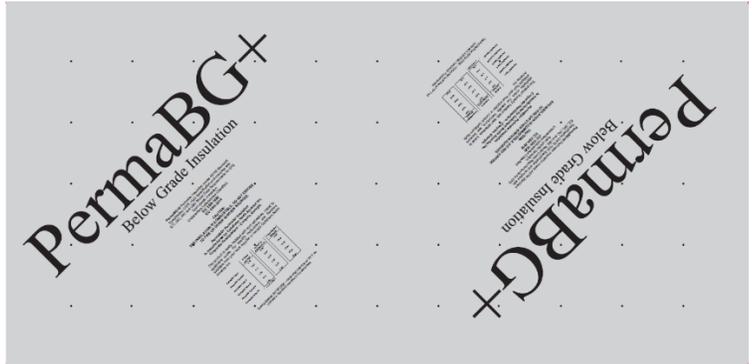




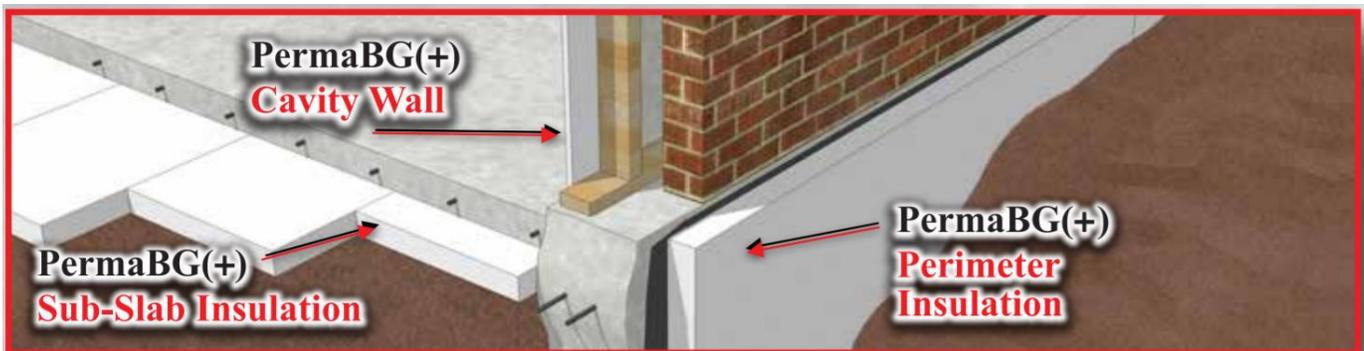
PermaBG+™

Below Grade, Insect/Termite Resistant, EPS Foam Insulation

Cellofoam® PermaBG+™ is a below grade plastic foam insulation with rugged facers on both sides to handle the tough environment around and below foundations. The core of PermaBG+ is made of expanded polystyrene (EPS) treated with an insecticide to provide resistance against various types of insects, including termites. With a high compressive strength, excellent moisture resistance, and a lower cost than XPS, PermaBG+ is an ideal below grade perimeter or sub-slab insulation. PermaBG+ may also be used in cavity walls where local jurisdictional code requires insect treated foam insulation.



PermaBG+™ EPS insulation incorporates a heat laminated, tough polypropylene facer on both sides for added strength and durability in storing, handling and installation. Two insecticide options are used in the EPS core, one for lower risk termite areas and the other, a premium product, for IBC "Very Heavy" infested areas. Both insecticides are registered with the Environmental Protection Agency for this application. As the insecticides act as a deterrent but not a barrier to insects, PermaBG+ should be used as just one part of a more comprehensive pest management program.



ADVANTAGES

Replacement for XPS around Foundations: PermaBG+ costs less and installs the same as XPS.

Stable R-value: The R-value of Cellofoam PermaBG+ is permanent because the only gas in EPS is air. Unlike Polyiso or XPS whose blowing agents outgas and therefore lose R-value, EPS R-values do not degrade over decades of use.

Moisture Resistant: Cellofoam EPS has a water-resistant closed cell structure, is quick drying, and does not readily absorb moisture from the air. Its closed-cell structure reduces the absorption and migration of moisture.

Code Approvals: PermaBG+ complies with model building codes including the IBC, IRC, and IECC, and is Underwriters Laboratory Listed, UL ER7260. Please consult local building codes for system requirements.

Premium Quality: Meets or exceeds ASTM C578 specs, with excellent dimensional stability & compressive strength.

Environmentally Friendly: Cellofoam EPS contains no formaldehyde or ozone-depleting CFCs or HCFCs. It is 100% recyclable and may contain recycled material.

Manufactured to your Needs: Cellofoam PermaBG+ is available in 4 or 8 ft. long boards of varying widths, with thicknesses up to 6 in., and in ASTM C578 nominal densities from 1.0 to 3.0 lb/ft³. Typical Physical properties of the core EPS appear in the table on the next page for most EPS Types. For 2.5 and 3.0 pcf EPS (Type XIV and XV, 40 and 60 psi compressive strength, respectively) see *Cellofoam Tech Note 102, High Density EPS Physical Properties*.



CELLOFOAM®
North America Inc.

PermaBG+™

Cellofoam® EPS Typical Physical Properties ¹		Units	ASTM Test	ASTM C578 Type			
				Type I	Type VIII	Type II	Type IX
Density (Nominal)		lb/ft ³	C303 or D1622	1.0	1.25	1.5	2.0
Density (Minimum)		lb/ft ³		0.90	1.15	1.35	1.80
Thermal Resistance							
R-Value ²	at 25° F	(°F ft ² hr) / Btu per inch	C177 or C518	4.35	4.54	4.76	5.00
	at 40° F			4.17	4.25	4.55	4.76
	at 75° F			3.85	3.92	4.17	4.35
Compressive Strength at 10% deformation		psi	D1621	10 - 14	13 - 18	15 - 21	25 - 33
Flexural Strength		psi	C203	25 - 30	30 - 38	40 - 50	50 - 75
Water Vapor Permeance 1.0 in. thickness		perm.	E96	2.0 - 3.0	1.5 - 2.8	0.9 - 2.5	0.6 - 1.5
Water Absorption by total immersion		volume %	C272 or C1763	< 1.5	< 1.5	< 1.5	< 1.5
Capillarity		--	--	none	none	none	none
Dimensional Stability maximum		change %	D2126	< 0.5	< 0.5	< 0.5	< 0.5
Coefficient of Thermal Expansion		in/(in °F)	D696	0.000035	0.000035	0.000035	0.000035
Fungus & Bacterial Resistance		-	C1338	Will not support bacterial or fungus growth; no food value			

¹ Typical physical properties are based on data provided by resin manufacturer, independent test agencies, and Cellofoam North America Inc. All data is for plain, unlaminate EPS foam.

² R means resistance to heat flow. The higher the R value, the greater the insulating power.

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Winchester, VA
326 McGhee Road
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CAUTION: 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.

Cellofoam North America Inc. is an expanded polystyrene foam manufacturer and not an engineering consulting firm. Thus, it is beyond our scope to provide design services on the specific use for our products. Users of our EPS products such as PermaBG+ should consult with appropriate engineering and code experts to determine the exact type and specifications of EPS required for their project. The sale of these products shall be subject to Terms and Conditions of Sale, including those limiting warranties as set forth in Cellofoam's invoices. No agent, employee, or representative of Cellofoam North America Inc. or its subsidiary or affiliated companies is authorized to modify this disclaimer.