

PRODUCT DATA SHEET



The **POLYGUARD PolyPhen™** thermal insulation is one component in our **PolyPhen™** system including a range of rigid foam insulation densities designed for piping systems, tanks, vessels and ductwork in commercial and industrial applications.

The **PolyPhen™** rigid foam insulation products, have thermal conductivities from 0.15-.22 Btu in/hr ft² and can be used to insulate surfaces operating within the temperature range of -290°F to +250°F (-180°C to + 120°C), and is manufactured to provide optimum thermal performance and flame resistance, low smoke emissions, environmental safety, and efficient cost.

PolyPhen™ rigid foam insulation is ideally suited for:

- Schools
- Hospitals
- Marine & ship building
- Food, beverage and brewery
- Pharmaceutical
- Industrial applications
- Commercial buildings
- Military & naval
- Multi-Family chilled water systems

PolyPhen™ 2500	2.5# Density
PolyPhen™ 3750	3.75# Density
PolyPhen™ 5000	5.0# Density
PolyPhen™ 7500	7.5# Density

Rigid foam insulation products have been specified for over 30 years in North America, **PolyPhen™** rigid foam products have proven that they provide outstanding thermal performance on commercial and industrial projects; hundreds of thousands of feet of pipe has been insulated with high R-value foam insulation.

Polyguard's Insulation technical expertise, seasoned sales force, and engineering expertise has proven to be the best solution time and again in major projects. In the eyes of engineering community and leading insulation contractors, our insulation system it is the solution to long lasting, efficient installation.

Essential design specifications include:

- Quality closed cell, efficient insulation
- Accurately fabricated, tight fitting insulation
- Firmly butted and sealed offset joints
- Vapor stops as needed
- Continuous, sealed ZeroPerm vapor barrier
- Mechanical and weather cladding

Providing a consistently high quality product means supplying insulation that, not only has a very high thermal efficiency, but is consistently preformed to fit the application. The use of computer cutting technology by specialist fabricators throughout North America increases the value of an insulation system.

Polyguard has engineering specifications and support for any project you may specify, cold or hot.

Polyguard offers a complete line of RG-2400® corrosion stopping and prevention gel products for refrigeration, heating, and chilled water piping systems.

Polyguard offers a complete line of ZEROPERM rated flexible cladding and vapor barrier products such as the Alumaguard™ family, the Insulrap™ family, and ZeroPerm™ films.

SPECIFICATIONS:

PolyPhen™ Technical Data

Meets the requirements of ASTM C 1126 type III products

PROPERTIES	STANDARD	UNITS	VALUE			
			TYPE			
			2.5 LB	3.75 LB	5 LB	7.5 LB
COLOR			Orange	Yellow/White	Pink/Red	Green
NOMINAL DENSITY	ASTM D-1622	lb/ft ²	2.5	3.75	5	7.5
CLOSED CELL CONTENT	ASTM D-2856	Minimum %	95	95	95	95
TEMPERATURE LIMITS		°F	-290 to +250	-290 to +250	-290 to +250	-290 to +250
THERMAL CONDUCTIVITY	ASTM C-518	Btu-in./hr-ft ² -°F@75°F	0.15 ± 0.02	0.17 ± 0.02	0.20 ± 0.02	0.22 ± 0.02
SPECIFIC HEAT		Btu/lb-°F	0.45	0.45	0.45	0.45
COMPRESSIVE STRENGTH Parallel to Rise	ASTM D-1621	lb/in ²	30	50	90	150
	ASTM D-1621	lb/in ²	25	40	70	110
TENSILE STRENGTH Parallel to Rise	ASTM D-1623	lb/in ²	23	45	80	100
	ASTM D-1623	lb/in ²	21	35	60	90
THERMAL AND HUMID AGING -40 ± 6°F Ambient RH	ASTM D-2126	% lin chg	≤2	≤2	≤2	≤2
	ASTM D-2127	% lin chg	≤2	≤2	≤2	≤2
	ASTM D-2128	% lin chg	≤2	≤2	≤2	≤2
WATER VAPOR PERMEABILITY	ASTM E-96	perm inch	≤4	≤4	≤4	≤4
WATER ABSORPTION	ASTM C-209	% by volume	≤2,5	≤2,5	≤2,5	≤2,5
FLAME/SMOKE Insulation only (2.5# tested 2-26-2016)	ASTM E-84					
	up to 4 inches	flame spread	0.0	≤25	≤25	≤25
	up to 4 inches	smoked developed	0.0	≤50	≤50	≤50

FABRICATOR PRODUCT AVAILABILITY:

POLYGUARD PART NUMBER	BUN DENSITY (LB.)	BUN COLOR	BUN LENGTH (Ft.)	BUN WIDTH (Ft.)	BUN HEIGHT (Ft.)	BRD. FT. IN BUN
POLYPHEN 2500	2.5	Orange	8.2	3	2.5	738
POLYPHEN 3750	3.75	Yellow/White	8.2	3	2.5	738
POLYPHEN 5000	5.0	Pink/Red	8.2	3	2.5	738
POLYPHEN 7500	7.5	Green	8.2	3	2.5	689