



INSUL-PHEN® RIGID PHENOLIC INSULATION

CFC & HCFC Free | Closed-Cell Phenolic Foam | ASTM C1126 Type II & III Grade 1

High-performance rigid phenolic foam insulation offering excellent thermal efficiency, low water absorption, and strong compressive strength. Suitable for a wide range of mechanical insulation applications including pipe, equipment, and vessel insulation. Compatible with austenitic stainless steel (ASTM C795 Pass).

Key Features

- CFC and HCFC free formulation
- Excellent thermal conductivity (k-factor 0.180)
- High closed-cell content (minimum 92%)
- Low water absorption
- Meets ASTM E84 25/50 flame and smoke requirements (1"-3" thickness, faced or unfaced)
- Passes ASTM C795 for use over austenitic stainless steel
- Service temperature range: **-290°F to 250°F**

Physical Properties

PROPERTY	TEST METHOD	VALUE
Color	—	Green
Temperature Limits	—	-290°F to 250°F
Specific Heat	—	0.45 Btu/lb·°F
Thermal Conductivity (k-Factor)	ASTM C518	0.180 Btu·in/hr·ft²·°F
Nominal Density	ASTM D1622	2.5 lb/ft³
Compressive Strength (at 10% deflection)	ASTM D1621	24.1 psi
Closed Cell Content	ASTM D6226	Minimum 92%
Water Absorption (sorption)	ASTM C209	0.61% by volume
Water Absorption (volume %)	ASTM D2842	1.7%
Contact with Austenitic Stainless Steel	ASTM C795	Pass
Surface Burning Characteristics (1" to 3" thickness, faced or unfaced)	ASTM E84	Flame Spread ≤ 25 Smoke Developed ≤ 50

Meets the requirements of ASTM C1126 Type II and Type III Grade 1 for faced or unfaced rigid cellular phenolic thermal insulation.

Dimensional Stability (ASTM D2126 – Absolute Change)

CONDITION	WEIGHT	LENGTH	WIDTH	THICKNESS
-40°F	0.041 g	0.010 in	0.011 in	0.003 in
156°F / 95% RH	4.049 g	0.087 in	0.089 in	0.003 in
267°F	1.581 g	0.026 in	0.017 in	0.028 in

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