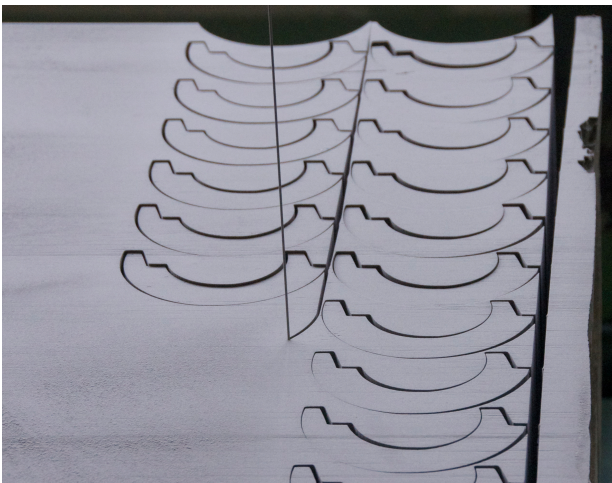


TECHNICAL DATA SHEET

Phenolic foam technical insulation



PRODUCT DETAILS



SUPERCEL® High Density is a high-performance, rigid closed-cell thermoset phenolic foam developed specifically for thermal insulation applications requiring high mechanical resistance and excellent fire behavior.

Supplied in large bun form, it is engineered for easy fabrication into a wide range of shapes including pipe sections, curved segments, flat sheets, and tank or vessel coverings. The product is particularly suited for use in high-stress areas such as pipe supports, valve and fitting covers, and areas requiring increased compressive strength, while maintaining excellent thermal insulation properties.

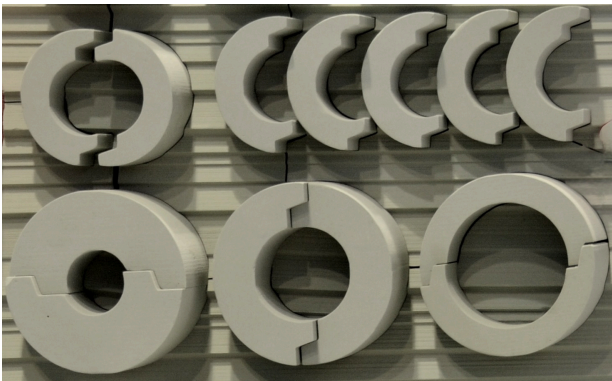
Thanks to its fine cell structure and inherently low thermal conductivity, SUPERCEL® High Density offers outstanding energy efficiency across a wide temperature range.

The operating temperature range is from -183°C to +125°C (equivalent to -297°F to +257°F), the same as standard-density phenolic foams. It is also characterized by its exceptionally low flammability, making it a preferred choice in fire-sensitive environments.

For specific projects, consultation with design engineers or local code officials is recommended to ensure compliance with project-specific or regional regulations.

THERMAL CONDUCTIVITY λ_D	0.16 BTU·in/h·ft²·°F at 50°F mean temperature
SUGGESTED APPLICATIONS	High-stress areas such as pipe supports

ITEM SPECIFICATION



Thermal insulation performed using SUPERCEL® High Density – a rigid closed-cell phenolic foam block, CE marked according to EN 14314 and verified by an Environmental Product Declaration (EPD). The product has a thermal conductivity $\lambda = \dots$ BTU·in/h·ft²·°F, a reaction to fire Euroclass B-s1,d0 according to EN 13501-1 or Flame spread / Smoke developed indices $\leq 25/50$ according to ASTM E84. Compressive strength $\geq \dots$ psi, suitable for the insulation of industrial, commercial, and mechanical pipework, or other applications requiring high structural stability and excellent fire performance. (...)*

*it is advisable to complete the specifications by indicating the most relevant characteristics and performances for the specific application

TECHNICAL CHARACTERISTICS (typical values)

Harmonized product standard

EN 14314:2008+A1:2013 - Thermal insulation for building equipment or industrial installations - Factory made phenolic foam
ASTM C1126 Type III - Standard specification for faced or unfaced rigid cellular phenolic thermal insulation

PROPERTIES	NORMS	3.75 PCF	5.0 PCF	7.5 PCF
Thermal Conductivity at 50°F	EN 12667 ASTM C518 eq.	0,032 W/mK 0.22 BTU·in/h·ft²·°F	0,033 W/mK 0.23 BTU·in/h·ft²·°F	0,035 W/mK 0.24 BTU·in/h·ft²·°F
Apparent mass	EN 1602 ASTM D1622 eq.	3.75 lb/ft³ (60 kg/m³)	5.0 lb/ft³ (80 kg/m³)	7.5 lb/ft³ (120 kg/m³)
Operating temperature range	-	-180 / +120 °C -297 / +257 °F	-180 / +120 °C -297 / +257 °F	-180 / +120 °C -297 / +257 °F
Compressive strength	ASTM C1621 eq.	Parallel ≥ 60psi Perpendicular ≥ 45psi	Parallel ≥ 88psi Perpendicular ≥ 71psi	Parallel ≥ 158psi Perpendicular ≥ 188psi
Closed cell content	EN ISO 4590 ASTM D6226 eq.	≥ 95%	≥ 95%	≥ 95%
Reaction to fire Surface burning @3" thick	EN 13501-1 ASTM E84	C s₁ d₀ FSI 25 / SDI 50*	C s₁ d₀ FSI 25 / SDI 50*	C s₁ d₀ FSI 25 / SDI 50*
Bun Yield Dimensions	-	41 x 41 x 30 in.	41 x 41 x 22.8 in.	41 x 41 x 15 in.

INDICATIONS FOR USE

When using pipe sections from the **SUPERCEL® Piping Insulation** product range, in phenolic foam, it is advisable to keep in mind the following good practices:

- The blocks or segments must be stored, even when on site, indoors or protected by waterproof sheets, in their original packaging, dry and protected from bad weather;
- The blocks or segments must not be bonded to degraded supports;
- The blocks or segments must not be used if damaged or deteriorated;
- The blocks or segments were not designed with the intention of providing a finished covering;
- The blocks or segments must be cut using mechanical cutting.

Any small void areas in the foam may originate from the production cycle. These areas do not affect the physical-mechanical properties of the products in any way.

NOTES

*This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.

The blocks or segments of the **SUPERCEL® Piping Insulation** product range, in expanded phenolic foam, are considered articles with reference to the European regulations (Reg. 1906/2007/EC - REACH), therefore they do not require safety data sheets.

When using the product, it is advisable to wear protective gloves and glasses and to comply with the workplace safety regulations.

The information and instructions reported above, although corresponding to our best knowledge, are to be considered, in any case, purely indicative; therefore, before using the product, anyone who intends to use it is required to establish whether or not it is suitable for the intended use, and in any case, assumes any responsibility that may arise from its use.

The most updated technical data sheet is available on the website at the following address: www.resineisolanti.com.