



CRYO-SUPER MAT

Cold Service Insulation



Cryo Super Mat Advantages

- **TRUE DUST FREE** Blanket: Eliminates high cost of PPE.
- **Flexible and Durable:** Textile grade E-glass fiber impregnated with PTFE resin renders it a hydrophobic, flexible and durable blanket suitable over a wide temperature range.
- **Vapor Barrier/Retarder:** Features Zero Permeability and is laminated to Cryo Super Mat for superior moisture resistance.
- **Wide Temperature Range:** Tested from -195°C (-320°F) to +149°C (+300°F).
- **Ease of Fabrication:** Cuts and slits cleanly without dust; handles and installs with ease.
- **Cost Efficient:** Eliminates the need for contraction joints, simplifies installation and reduces cost.
- **Adhesion-friendly:** Vapor barrier compatible with tapes and adhesives.
- **Thermally Efficient:** Low thermal conductivity.
- **Chemical Resistance:** Resistant to hostile chemicals.
- **Convenient Sizing:** Available in 60" roll width, can be slit to various widths.

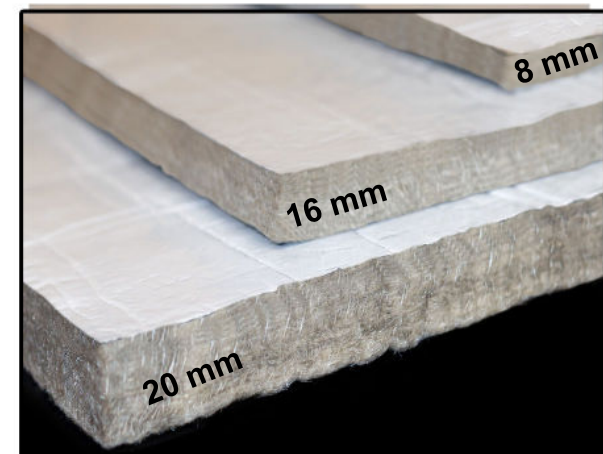
Thermal Conductivity

Tested in accordance with ASTM C177

Temperature (°C)	-158	-129	-100	-73	-46	-18	10	38	149
Thermal Conductivity (W/m·K)	.018	.022	.025	.029	.032	.035	.038	.043	.050
Temperature (°F)	-252	-200	-148	-99	-51	-4	50	100	300
Thermal Conductivity (Btu·in/hr·ft²·°F)	0.12	0.15	0.17	0.20	0.22	0.24	0.26	0.30	0.35

Physical Properties

Color	Grey blanket / white vapor barrier		
Density	144 to 192 kg/m³ (9 to 12 lb/ft³)		
Thickness	8 mm (0.3 in)	16 mm (0.63 in)	20 mm (0.78 in)
Service Temp	-195°C (-320°F) to +149°C (+300°F)		
Width	Standard 1.5 m (60 in) (Can be slit to various widths)		



Material Performance Data

Test Method	Performance	Value
HOUSE TESTED	Linear Shrinkage After Soaking in Liquid Nitrogen Bath for 1 Hour (remains flexible and strong after 10 minutes at room temp)	<1% @ -180°C (-292°F)
ASTM C795	Corrosiveness over Austenitic SS	Passed
ASTM C1101	Classifying Flexibility	Resilient Flexible
ASTM C1104	Water Vapor Sorption	<1% (by wt.)
ASTM C1338	Fungi Resistance	Passed
ASTM C1763	Water Absorption by Immersion	Procedure B, <5%
ASTM C1511	Liquid Water Retention Post-submersion, after (CRYO) aging	<5% (by wt.)
ASTM E84	Surface Burning Characteristics w/o Vapor Barrier	FSI=0; SDI=0
ASTM E84	Surface Burning Characteristics with Vapor Barrier	FSI=25; SDI=50
ASTM C165	Compressive Resistance @ 10% deformation	≥5psi (34.5kPa)

Performance of Vapor Barrier/Retarder Membrane

Test Method	Property	Results
ASTM E96 - Dry Cup	Water Vapor Transmission	0 Perms

Cryo Testing and Thermal Imaging



Manufacturing



Packaging



Inventory



This information is given in good faith and is believed to be accurate. No expressed or implied warranty of any kind including those of merchantability or fitness for a particular purpose is made as to the performance of an installation. Super Insulation, LLC does not take any responsibility for misuse of these products and recommends testing before use.

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