

Unifrax Excelfrax® 200 VIP Vacuum Insulation Panel

Category : Ceramic , Oxide , Silicon Oxide

Material Notes:

Excelfrax® 200 VIP is a Vacuum Insulation Panel (VIP) designed to provide insulation at temperatures between -300°F and +300°F. This thermal insulation provides extremely low thermal conductivity by reducing the heat transfer due to convection and conduction. Welded in polyethylene (PE) film under vacuum, the low thermal conductivity values of Excelfrax 200 VIP are due to low inner pressure. Its insulating value provides equipment designers and users with advantages such as design flexibility by reducing insulation space requirements in appliances, increased volume in commercial and domestic refrigerators, reduction in package size and weight of insulated shipping containers, increased volume for cargo in insulated shipping containers, and allows for longer shipping times/distances for temperature-controlled transportation systems. Typical Applications Residential and industrial refrigerators Insulated packaging/shipping containers Refrigerated trucks/transportation systems Marine/Recreational Vehicle refrigerators Vending machines Cold storage units Information Provided by Unifrax I LLC

Order this product through the following link:

http://www.lookpolymers.com/polymer_Unifrax-Excelfrax-200-VIP-Vacuum-Insulation-Panel.php

Physical Properties	Metric	English	Comments
Density	0.186 g/cc	0.00671 lb/in ³	

Mechanical Properties	Metric	English	Comments
Compression Set	7.0 % @Pressure 0.100 MPa	7.0 % @Pressure 14.5 psi	

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.800 J/g-°C @Temperature 32.0 - 800 °C	0.191 BTU/lb-°F @Temperature 89.6 - 1470 °F	
Thermal Conductivity	0.00363 W/m-K @Pressure <=0.00100 MPa	0.0252 BTU-in/hr-ft ² -°F @Pressure <=0.145 psi	
	0.00366 W/m-K @Pressure 0.100 MPa	0.0254 BTU-in/hr-ft ² -°F @Pressure 14.5 psi	
	0.00375 W/m-K @Pressure 1.00 MPa	0.0260 BTU-in/hr-ft ² -°F @Pressure 145 psi	
	0.00425 W/m-K	0.0295 BTU-in/hr-ft ² -°F	

Thermal Properties	@Pressure 10.0 MPa Metric	@Pressure 1450 psi English	Comments
	0.00484 W/m-K	0.0336 BTU-in/hr-ft ² -°F	
	@Pressure 25.0 MPa	@Pressure 3630 psi	
Maximum Service Temperature, Air	90.0 °C	194 °F	Recommended Operating Temperature
Minimum Service Temperature, Air	-30.0 °C	-22.0 °F	Recommended Operating Temperature
Shrinkage	0.030 %	0.030 %	All sides, long term
	@Temperature 50.0 °C	@Temperature 122 °F	
	0.10 %	0.10 %	All sides, long term
	@Temperature 100 °C	@Temperature 212 °F	

Component Elements Properties	Metric	English	Comments
SiC	15 %	15 %	
SiO ₂	80 %	80 %	

Descriptive Properties	Value	Comments
Cold Crushing Strength (MPa)	0.5	DIN 51067 / DIN 53421
Color	Silver	
Heat Flux (W/m ² -K)	0.187	<.001
	0.188	0.1
	0.193	1
	0.219	10
	0.249	25
Other Inorganics (%)	5	

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