

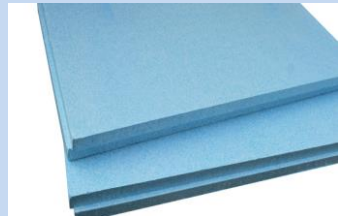






INDUSTRIAL ENTERPRISES (Pvt) LTD

6-N, INDUSTRIAL AREA, GULBERG II, LAHORE, PAKISTAN

TEL: 042-35712229, 35752229, FAX: 042-35713119, E-mail: info@thermopore.com

Insulation Material Comparison

Material Comparison					
Material	Expanded Polystyrene (EPS)	Polyurethane (PU) Spray Foam	Polyurethane (PU) Sheet	Extruded Polystyrene (XPS)	Rock Wool
Brand name	Thermopore-BLUE®	Thermospray®	Thermospray Sheet®	Jumbolon Board®	Incom Rock wool
Approx cost (per inch)	Rs. 30/-	Rs. 56/-	Rs. 60/-	Rs. 45/-	Rs. 28/-
Thermal Resistivity (R-Value per inch)	5.85 F-ft ² ·h/Btu	6.50 F-ft ² ·h/Btu	6.80 F-ft ² ·h/Btu	5.85 F-ft ² ·h/Btu	4.00 F-ft ² ·h/Btu
Cost per R-value	5.13	7.06	8.82	7.18	7.00
Cell Formation	97.3% closed cell formation	95.0% closed cell formation	95.0% closed cell formation	97.7% closed cell formation	N/A
Density	35kg/m ³	32-35kg/m ³	32-35kg/m ³	32-35kg/m ³	37 kg/m ³
Thermal conductivity	0.03 W/(m·K)	0.02 W/(m·K)	0.03 W/(m·K)	0.03 W/(m·K)	0.04 W/(m·K)
Compressive Strength	270 kpa	210 kpa	300 kpa	300 kpa	10 kpa
Water absorption	0.15% immersion	0.35% immersion	0.30% immersion	0.15% immersion	10%
Est. Useful Life	+25 years	15 years	20 years	20 years	10 years
Installation	Sheets placed on the roof	Liquid sprayed on the roof	Sheets placed on roof	Sheets placed on roof	In the form of rolls
Requires waterproofing	Yes	Yes	Yes	Yes	Yes
Recommended Thickness	2.0"	1.5"	1.5"	2.0"	N/A

THERMOPORE® , THERMOPORE-BLUE® and THERMOSPRAY® are our registered trademarks

Head Office: 6-N Gulberg II, Industrial Area, Lahore. Tel: 042-35712229, 042-35752229 Fax: 042-35713119 Mobile: 0321 6654866

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Insulation Material Comparison

Advantages	<ul style="list-style-type: none"> ▪ Economical ▪ Low-cost per R-Value ▪ Light weight ▪ Range of densities, sizes and thicknesses ▪ Easily moulded ▪ Overlap sheets available ▪ CFC free 	<ul style="list-style-type: none"> ▪ High R-Value ▪ Seamless application ▪ Adhesion properties ▪ Applied on site 	<ul style="list-style-type: none"> ▪ Even Surface ▪ Best R-value (highest insulation) ▪ Easy installation 	<ul style="list-style-type: none"> ▪ Smooth finish ▪ Available in tongue and groove ▪ CFC free 	<ul style="list-style-type: none"> ▪ Fire Resistant ▪ Easy to install as it comes in roll form ▪ Provides excellent sound resistance
Limitations	<ul style="list-style-type: none"> ▪ Rigid foam sheets 	<ul style="list-style-type: none"> ▪ Porous / limited life ▪ High cost per R-value ▪ Non-uniform density distribution 	<ul style="list-style-type: none"> ▪ High cost per R-value ▪ Joints in sheets 	<ul style="list-style-type: none"> ▪ High cost per R-value ▪ Rigid foam sheets ▪ Non-uniform density distribution 	<ul style="list-style-type: none"> ▪ Extremely water absorbent ▪ Limited life if exposed to water ▪ Does not provide a high insulation value

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