

## Polyethylene Material Data Sheet

Polyethylene is a chemically cross-linked foam that provides excellent insulation. It is resistant to moisture.

Chemically cross-linked polyethylene foam will last almost permanently without change due to its excellent heat & cold resistance and durability. It has strong resistance to chemicals, temperature extremes and ageing, and has excellent flexibility. It also provides shock absorption.

Polyethylene provides both anti-noise and anti-vibration. It is flame retardant and releases no toxic smoke when in a fire.

The Foil Face Insulation we supply has passed Australian Standards Test Method 1530 part 3.

Test Report	Mean	Standard Error
Ignition Time	1.7min	0.08
Flame Propagation Time	Nil	Nil
Heat Release Integral	17.6kJ/m <sup>2</sup>	0.5
Smoke Release, log d	-1.6630	0.0259
Optical Density. d	0.0219/m	
Tested AS/NZS 1530.3 – 1999		

Test Report	Polyethylene	Range
Spread of Flame Index	0	0 – 10
Heat Evolved Index	0	0 – 10
Smoke Developed Index	2	0 – 10
Tested AS/NZS 1530.3 – 1999		

## Various MTL Comparison Table

Item	Density (g/cm <sup>3</sup> )	Conductivity (Kcal/mh°C)	Water Resistance	Ageing
Polyethylene	0.025	0.029	Excellent	Excellent
Styrofoam	0.030	0.031	Good	Good
Polystyrene	0.015	0.031	Good	Good
PU Foam	0.025	0.032	Poor	Poor
Glass Wool	0.01	0.034	Poor	Good

### Distributors & Agents for Rubber, Foam & Matting Supplies

- ✓ Self Adhesive Sealing Tape
- ✓ Insertion, Neoprene & Nitrile Rubber
- ✓ Commercial Matting
- ✓ Door & Boot Rubber Seals
- ✓ Grip Products



- ✓ Auto & Marine: Matting / Carpets / Vinyl
- ✓ Latex & Foam Mattresses
- ✓ Foam Cut to Size
- ✓ Marine Fender & Hatch Seals

### Comparison of Insulation for Panel

		<b>Polyethylene</b>	<b>Glass Wool</b>	<b>Styrofoam (EPS)</b>
Physical Characteristics	Raw Material	Non-toxic Polyethylene	Scrapped glass mixed with resin	Expanded Polystyrene
	Density (g/cm <sup>3</sup> )	0.029 ~ 35	0.024 ~ 32	0.015 ~ 20
	Absorption (g/cm <sup>3</sup> )	0.01%	8%	0.8%
	Thermal Conductivity (kcal/mhr°C at 20°C)	0.029	0.042	0.076
	Estimated Life Cycle	15 years	5 years	10 years
General Information	Insulation	Excellent	Excellent	Excellent
	Heat Resistance	120°C	400°C	<90°C
	Anti-Condensation	Excellent	Poor	Good
	Water Resistance	Excellent	Poor	*
	Sound Absorption	Excellent	Good	Poor
	Chemical Resistance	Excellent	Excellent	Poor
	Fungal Resistance	Excellent	Poor	*
	Shrinkage	None	Poor	None
Flammability	Toxicity	None	Carcinogenic	Toxic in fire
	Non-flammability	Fire Retardant	Fire Retardant	Flammable
Construction	Flame Protection	Good	Good	*
	Economic Efficiency	Economic	Economic	*
	Construction	Simple, no special clothing required  Favourable in rainy season	Slightly complicated  Coverings & dust masks needed	Special tools & equipment required
	Working Time	Shortest	Longer	Longer
	Maintenance	Material is flexible/soft  Handle with care	Damage can easily occur  High absorption of water  Trouble with fungus	Glue may melt in harsh sun & moisture  Water may condense in overlap
	Repairs	Easy	Difficult	Difficult
Example of Thermal Conductivity	The effect of Polyethylene at 10mm is equal to glass wool at 25mm.			

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