Key ETFE Characteristics

The Key Properties of ETFE Sheeting	Value	Test Method
Melting Range	275° C ± 10	DSC 16 K/min
Elongation At Break	150% – 200%	Test pieces acc. to ASTM D-1708
Fatigue Strength	N/mm^2 – No Break	DIN 53 452
Deformation Under Load	4% - 6%	ASTM D-621, P = 15 N/Mmm^2 ,T = 100H
Heat Deflection With Vicat Needle VST/B/50 In The Air	134° C	DIN 53 460
Ball Pressure Hardness	31 N/mm^2 – 33 N/mm^2	DIN 53 456
Cold Fracture – Longitudinal, Cold Strength – Transverse	Minus 180° C, Minus 160° C	DIN 53 372
Tear Strength - Propagating	180 N/mm	DIN 53 515, 23° C
Moisture Pick Up	None	DIN 53 471
Weathering Resistance	No Change	Xenotest 150/Hanau
Light Transmission	95%	Ulbricht globe/system light bulb
Foil Weight 150 Microns	262.5 g/m^2	DIN 55 352
System Properties of pneumatic pillow of 3 foils of 150 Microns	1.95 W/m^2K	
G value (coefficient of transparency) K – v r values of a 3 layered pneumatic pillow	0.05 – 0.85	

DIN = German Institute for Standardisation

Structural Properties

Test Description	Result	Test Method
Tensile Strength At Break	34,000 / 7,000 psi	ASTM D-882
Elongation At Break	45/650%	ASTM D-882
Small Missile Impact Test	Pass	PA 201 / SSD 12-99
Cyclic Load Test	Pass at 60 psf	PA 203 / SSD 12-99

Flammability

Test Description	Result	Test Method
Flammability Rating	B1 (Flame Retardant No Burning Drip)	DIN 4102
Surface Burning Characteristics	Class A	NFPA 101
Flash Ignition Temperature	878° F	ASTM D-1929
Rate of Burning	HB – No Visible Combustion	ASTM d-635-98