

# Typical Physical Properties

## Alupanel®

Property	Conditions	Units	Value/Thickness		
			2mm	3mm	4mm
<b>Physical</b>					
Relative Density		g/cm <sup>3</sup>	2.9	3.8	4.75
Water Absorption	24 hr @ 23°C	%	0.01		
<b>Mechanical</b>					
Pencil Hardness			>HB		
Toughness of coating			3T		
Tensile Strength at yield	10mm/min	MPa	145		
Tensile Strength at break	10mm/min	MPa	185		
Elongation at yield	10mm/min	%			
Elongation at break	10mm/min	%			
Tensile Modulus of Elasticity	1mm/min	MPa	70,000		
Izod Impact Strength	notched	J/m			
Charpy Impact Strength	notched	J/m			
Impact Falling Weight	3mm sheet	J			
Rockwell Hardness					
Peel Strength 180°		N/mm	>5		
<b>Thermal</b>					
Service Temperature		°C	-50 to +90		
Coefficient of Thermal Expansion		mm/m°C	0.024		
Thermal Resistance	R	m <sup>2</sup> K/W	0.0047	0.0057	0.0072
Specific Heat Capacity		kJ/kg°K			
<b>Electrical</b>					
Dielectric Strength	500V/s	kV/mm			
Surface Resistivity	Keithley	Ω			
<b>Chemical Resistance</b>					
Boiling Water	2 Hours		No Change		
Acid	24 Hr @ 2% HCl		No Change		
Alkali	24 Hr @ 2% NaOH		No Change		
Oil	24 Hr @ 2% Engine Oil		No Change		
Solvent	100 x Dimethylbenzene		No Change		
Cleaning Resistance	>1000 times		No Change		

Other physical properties and values available on request.

## Flammability:

Standard	Classification
BS 476 Part 7	Class 1