

## Data sheet – Aluminium Composite (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 conductivity	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-1			
Surface resistivity	Keithley	Ω			
<b>Chemical Resistance</b>					
Boiling water	2 hours		No change		
Acid	24 Hr @2% HC1		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		