




## DATA PERFORMANCE SHEET UK NUMBER PLATE GRADE ACRYLIC

		Notation of test or measure
<b>MATERIAL</b>	<ul style="list-style-type: none"> <li>Impact Modified Acrylic (master batch)</li> </ul>	Extruded in accordance with ISO 7823-2 Standard and EN ISO 9001:2001
<b>GRADE</b>	<ul style="list-style-type: none"> <li>Silwood NPG Acrylic Performance tested</li> </ul>	Bsau145e:2018
<b>PROTECTIVE FILM</b>	<ul style="list-style-type: none"> <li>Front face protection only coloured Opal.</li> <li>60 Micron CoEx Grade controlled bond</li> </ul>	
<b>DENSITY / WEIGHT</b>	<ul style="list-style-type: none"> <li>1.18 g/cm<sup>3</sup> Tolerance +/- 1%</li> </ul>	ISO 1183
<b>THICKNESS</b>	<ul style="list-style-type: none"> <li>3.1mm</li> <li>Performance Tested minimum thickness 3mm</li> </ul>	Extruded to plus or minus 2% Bsau145e:2018
<b>RIGIDITY</b>	<ul style="list-style-type: none"> <li>Bend Test rig suspended weight</li> </ul>	Bsau145e:2018
<b>SURFACE FINISH</b>	<ul style="list-style-type: none"> <li>Extruded Clear and free of blemishes</li> <li>Shore Hardness 85 D-Scale</li> </ul>	
<b>OPTICAL PROPERTIES</b>	<ul style="list-style-type: none"> <li>Clear 00 Total Light Transmission 91%</li> <li>Haze &lt; 1%</li> <li>Refractive Index 1.49</li> <li>Water Absorption 0.3%</li> </ul>	ASTM D1003 ASTM D1003 ISO 489 ISO 62 (1)
<b>OPTICAL INCLUSIONS</b>	<ul style="list-style-type: none"> <li>Control over a given area of maximum faults with a minimum distance between of 1 metre</li> <li>*Black Specs of 0.5mm size</li> <li>*Air Bubbles of 0.3mm size</li> <li>Fish eyes of 1mm size up to an area of 0.5m<sup>2</sup></li> </ul>	ISO 7823-2
<b>IMPACT RESISTANCE</b>	<ul style="list-style-type: none"> <li>Falling weight test minimum impact energy 7.5 J</li> </ul>	Bsau145e:2018
<b>THERMAL PROPERTIES</b>	<ul style="list-style-type: none"> <li>Maximum shrinkage 3%</li> <li>Recommended Maximum Temperature /short time 90°C</li> <li>Heat deflection temperature (1.8MPa) 95° C</li> <li>Coefficient of linear thermal expansion parallel 0.07 mm/m °C</li> <li>Vicat Softening Temperature (50N) 101°C</li> </ul>	ISO 75-1 ISO11359  ISO 306
<b>MECHANICAL PROPERTIES</b>	<ul style="list-style-type: none"> <li>Tensile Strength 60 MPa – SNP7200 / 55MPa - NPG Acrylic</li> <li>Elongation at Break 12 %</li> <li>Tensile Modulus 2720 MPa – SNP7200 / 2400 – NPG Acrylic</li> <li>Flexural Strength 93 MPa – SNP7200 / 90 – NPG Acrylic</li> <li>Flexural Modulus 2700 MPa- SNP7200 / 2400 – NPG Acrylic</li> </ul>	ISO 527-2  ISO527-2 ISO527-2  ISO178 ISO179



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<b>WEATHERABILITY</b>	<ul style="list-style-type: none"> <li>• Excellent colour stability, good mechanical properties, UV resistant, very good weathering and age resistance</li> <li>• Ten years limited warranty</li> </ul>	
<b>RECYCLING SHEETS</b>	<ul style="list-style-type: none"> <li>• Acrylic sheets and their protective layers are fully recyclable</li> </ul>	
<b>QUALITIES</b>	<ul style="list-style-type: none"> <li>• Highly Transparent 91%</li> <li>• Insoluble in water, resistant to salty water.</li> <li>• Excellent optical properties and a brilliant surface</li> <li>• Can be used in contact with foods, RoSH and REACH certified</li> <li>• Does not contain any toxic materials or heavy metals, which may cause environmental damage or health risks. When material burns it does not produce toxic or corrosive gases and is compliant with international standards</li> </ul>	
<b>HANDLING RECOMMENDATIONS AND TIPS</b>		
<b>EXPANSION GUIDE</b>  <b>DRILLING</b>   <b>DRILL BITS</b>   <b>CLEANING</b>   <b>BONDING</b>	<ul style="list-style-type: none"> <li>• Sheet expands 0.07 mm for each degree by each metre.</li> <li>• You must drill a hole with a bigger diameter than the screw diameter to allow for thermal movement. Use PMMA compatible rubber washers between plastic sheets and metal / screw head.</li> <li>• Use only drills that are modified for use with plastics at the correct tip angle and RPM. Do not over tighten back off half a turn from the tight position to avoid expansion cracks</li> <li>• Use only water with mild washing up liquid. No alcohol solvents or commercial cleaning fluids should be used.</li> <li>• Adhesive will penetrate on stressed material causing crazing. Use only approved cements or adhesives.</li> </ul>	

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