

# Specification

## Product Benefits



- Lasts five times longer than timber.
- Reduced whole life costs.
- Low maintenance and easy to clean.
- Chip, crack and splinter proof.
- Vandal resistant.
- Tough and durable.
- Will not rot and is insect proof and non toxic.
- Can be cut, drilled, nailed, screwed, bolted, and stapled.

## Innovation Recycling Technology



Eco Plastic Wood products are produced entirely from mixed waste plastics that would have been destined for landfill.

- 100% recycled
- 100% recyclable
- Each tonne used saves 1.66 tonnes of CO<sub>2</sub>

<b>Description</b>	Eco Plastic Wood is made using 100% high quality recycled mixed waste plastics from post industrial and consumer use and where necessary selected process additives.	
<b>Composition</b>	Eco Plastic Wood profiles are composed of a proportion of LDPE (Low Density Polyethylene) HDPE (High Density Polyethylene), PP (Polypropylene) and other thermoplastic materials.	
<b>Production Process</b>	The polymers are ground, mixed and fused under high temperatures and pressures into pressed moulds.	
<b>Finish</b>	The surface is evenly coloured and shows a textured structure.	
<b>Properties</b>	<ul style="list-style-type: none"> <li>• Maintenance free</li> <li>• Durable</li> <li>• Frost proof</li> <li>• Does not leave toxic substances</li> <li>• UV resistant</li> </ul>	<ul style="list-style-type: none"> <li>• Wear resistant</li> <li>• Non rotting</li> <li>• Environmentally friendly</li> <li>• 100% recycled and recyclable</li> <li>• Shock proof and flexible</li> </ul>

Performance	Property	Value	
All figures quoted are averages and should be checked for specific applications	Density	0.924 - 0.966 Kg/dm <sup>3</sup>	
	Linear expansion coefficient	0.068- 0.075 mm/m/ °C	
	Moisture absorption	<0.46%	
	Vicat temperature	~107 C	
	Pull out value	3095 N	
	E-module	500 - 570 MPA	
	Breaking strength	15.5 - 17.9 MPA	
	Elongation at break	3.7 - 14.9%	
	Maximum pull strength	15.5 - 17.8 MPA	
	Elongation at maximum pull strength	3.5 - 4.8%	
	Impact resistance:		12.5 - 17.8 Kg/m <sup>2</sup>
		average	0.48 - 0.7 J
	Bend test:		550 MPA
		e-module	22.2 MPA
		Max. press force	7.5%
		Bend at max. press force	
<b>Chemical Stability</b>	Resistant to most common chemicals - contact us for specific information		

## Mechanical Properties of Styrene

### MECHANICAL PROPERTIES OF STYRENE

PROPERTIES	TEST METHOD	RESULTS	REMARKS
Tensile strength MPa	ISO 527	29	
Elongation at break %	ISO 527	2.4	
Modulus of Rupture MPa	BS 373	60	3 point bending
Modulus of elasticity MPa	BS 373	2440	
Stress at proportional limit MPa	BS 373	50	
Compression strength parallel to grain MPa	BS 373	56	
Compression strength perpendicular to grain MPa	BS 373	21	
Impact strength kJ/m <sup>2</sup>	BS 373	0.8	3 point bending
Water absorption %	ISO 82	0.1	50 x 30 x 10
Coefficient of thermal expansion 1/°C	DIN 62-53491	5 X 10 <sup>-5</sup>	-
Toxic Gas Factor - Only two detected from eight tested	SNES 714CO <sub>2</sub> , CO, HCl, HCN, H <sub>2</sub> SSO <sub>2</sub> , NOX, AMMONIA	0.7	Carbon dioxide
		2.6	Carbon monoxide 0 - 3 low toxicity
UV stability	ASTM E383-B	Accepted	No measureable change mechanical properties
Vicat softening point	ISO 306	92oC	-

These test results are indicative test and can be altered to suit various applications by changing the Specific Gravity of a given profile