

TECHNICAL DATA SHEET

Discription

Our sheet is a high quality extruded plastic sheet manufactured from recycled Low Density Polyethylene (LDPE) plastic. The recycled LDP plastic is reprocessed to form homogenous section of solid LDPE which is extruded trough a die, calendar rolled, colled and cut singe process.

Our sheet may be used to construct highly durable and weather resistant product which will exhibit the following benefits:

- Long life expectancy
- Maintenance free
- Highly resistant to impact and wear
- Non-toxic
- Non-leaching
- Non-sparking
- Unsupportive of organic growth
- Non-absorbent
- Will not rot
- Slip resistant
- Easily cut, machined drilled and fixed

Property	Value	Units	Test method
Compressive Strength	110	MPa	BS EN ISO 604:2003
Compressive Modulus	243	MPa	BS EN ISO 604:2003
Tensile Strength at Yield	10.8	MPa	BS EN ISO 527:1996
Tensile Strength at Break	10.4	MPa	BS EN ISO 527:1996
Tensile Elongation at Yield	176	%	BS EN ISO 527:1996
Tensile Elongation at Break	186	%	BS EN ISO 527:1996
Tensile Modulus	316	MPa	BS EN ISO 527:1996
Flexural Strength	10.8	MPa	BS EN ISO 178:2010
Flexural Modulus	299	MPa	BS EN ISO 178:2010
Thermal Expansion	1.8	Mm/m/10°C	
Impact Resistance	28.6	kJ/m ²	BS EN ISO 179-1
Water Absorption	0.44	Wt %	BS EN ISO 62-1999
Density	0.96	g/cm ²	BS EN ISO 1183-1:2004
Slip resistance (wet conditions)	32	Acceptable	BS 7976-2:2002

Surface Finish

Our sheet has an embossed surface which provides a good level of scratch and slip resistance.



Variability

The performance of products manufactured from recycled material is susceptible to variability from the feedstock, therefore the published technical data is offered for guidance purposes only.

The data has been obtained from extracting random test samples from the production process and subjecting those samples

Manufacturing tolerances

The manufacturing process used to make our sheets may be influenced by external factors and, as such, the following manufacturing tolerances are allowable

Size	Thickness	Maximum allowable	As specified +5%
		Minimum allowable	As specified -5%
	Width	Maximum allowable	As specified +6mm
		Minimum allowable	As specified -0mm
	Length	Maximum allowable	As specified +10mm
		Minimum allowable	As specified -0mm
Thread pattern	Maximum allowable	2.0mm	
	Minimum allowable	1.1mm	
Straightness	Square	Maximum allowable	10mm per sheet
	Deflection	Maximum allowable	10mm per sheet
		For Machine Direction line which results in bowing or warping	

Thermal movement



All plastics are susceptible to thermal expansion and contraction with temperature changes. Allowance for thermal movement should be incorporated into the design and construction of structures using our sheet, to prevent warping and buckling. Allowances within the structure for thermal movement are recommended as shown in the table below:

The following table assumes the following:

- Service temperature range of -10°C to + 35°C
- Thermal expansion and contraction up to 2.0 mm/ 1 m / 10°C
product is conditioned to ambient temperature prior to installation.

Ambient Temp °C	Potential for Expansion per 1 m	Potential for contraction per 1 m
-10	+9mm	0mm
-5	+8mm	-1mm
0	+7mm	-2mm
+5	+6mm	-3mm
+10	+5mm	-4mm
+15	+4mm	-5mm
+20	+3mm	-6mm
+25	+2mm	-7mm
+30	+1mm	-8mm
+35	0mm	-9mm

Fire conductivity

Our sheet is difficult to ignite, however, should the installation be involved in a developed fire, the spread of flame is commensurate with BS 476 Part 7 spread of flame Class 3.

Our sheets may be extinguished by employing an A, B or C classified fire extinguisher.

Chemical resistance

Our sheet has an excellent chemical resistance to a wide range of everyday chemicals and cleaning agent at ambient temperature.

Materials	Resistance to chemical attack		Comments
	20°C	60°C	
Water	Good	Good	
Sea Water	Good	Good	
Common Detergents (liquid)	Good	Good	
Sodium Chloride (common salt)	Good	Good	
Diesel oil	Good	Limited	Tests refer to 'full immersion'
Petroleum (Gasoline)	Limited	Not satisfactory	Tests refer to 'full immersion'
Alcohol (40% ethanol)	Good	Limited	Tests refer to 'full immersion'