



## TECHNICAL DATA SHEET

### Description

U **k-8** is a range of high quality extruded plastic profiles manufactured from recycled High Density Polyethylene (HDPE) plastic. The recycled HDPE plastic is reprocessed to form a homogenous section of blown HDPE which is extruded through a die, calendar rolled, cooled and cut in a single process.

### Applications

Multiplank REG can be used to constructed highly durable and weather-resistant products such as boardwalks, fencing and outdoor furniture.

### U **k-8** Options

X-Section	Finish Options	Lengths
18 x 140mm	Textured and Non-slip one side	Minimum 1100mm Maximum 4000mm
24 x 100mm		
24 x 140mm		
38 x 90mm		
38 x 140mm		
90 x 90 mm		

Colours: Black, Brown, Mid Brown, Grey, Green, Blue, Orange, Mid Red

All U **k-8** orders are subject to a minimum order quantity. Please contact the Customer Service Team on [01273333333](tel:01273333333) or [sales@gop.com](mailto:sales@gop.com).

### Product Performance

Test results have been obtained using a typical production sample tested at an independent test laboratory. Please note that recycled plastics are, by their nature, variable. The values following should be regarded as indicative of the material. Further guidance is available from gop. Please also see the User Guide.

### 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 to industry standard test regimes performed by a reputable, independent test house. Variability within the feedstock may also impact upon finish and colour uniformity.



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## U k-8 product performance specification

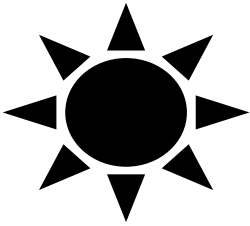
Property	Value	Units	Test method
Compressive Strength	46.0	MPa	BS EN ISO 604:2003
Compressive Modulus	1.2	GPa	BS EN ISO 604:2003
Tensile Strength	11.1	MPa	BS EN ISO 527:1996
Tensile Modulus	950.9	MPa	BS EN ISO 527:1996
Flexural Strength (23°C)	19.9	MPa	BS EN ISO 178:2010
Flexural Modulus	680	MPa	BS EN ISO 178:2010
Thermal Expansion	1.8	Mm/m/10°C	BS EN ISO 12856
Impact Resistance (Charpy Notched)	12.1	kJ/m <sup>2</sup>	BS EN ISO 179-1
Water Absorption	0.2	Wt %	BS EN ISO 62-1999
Density	0.7 typical	g/cm <sup>2</sup>	BS EN ISO 1183-1:2004
Water Absorption	0.061	Wt %	BS EN ISO 62-1999
Screw Pull Out	4.2	kN	BS EN ISO 1383:1999
Bolt Pull Out	>28	kN	BS EN ISO 527:1996
Slip Resistance (Dry) (Non slip side)	90 (Low)		BS 7972 pt 2
Slip Resistance (Wet) (Non slip side)	58 (Low)		BS 7972 pt 2

### Manufacturing tolerances

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

Size	Thickness	Maximum allowable	As specified + 2mm
		Minimum allowable	As specified - 4mm or 10% whichever is least
	Width	Maximum allowable	As specified + 1mm
		Minimum allowable	As specified - 4mm
	Length	Maximum allowable	As specified + 30mm
		Minimum allowable	As specified - 0mm
Straightness	Deflection	Maximum allowable	< 3.5 mm per linear metre
			For Machine Direction line which results in bowing or warping

## Thermal movement



All plastics are susceptible to thermal expansion and contraction with temperature changes. Allowances for thermal movement should be incorporated into the design and construction of structures using Multiplank REG 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 2.0mm/ 1m / 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

Multiplank REG is difficult to ignite, however, should the installation be involved in a developed fire, the spread of flame is commensurate with BS 476 Part 6 spread of flame Class 3. Multiplank REG may be extinguished by employing an A, B or C classified fire extinguisher.



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### Chemical resistance

Multiplank REG has excellent chemical resistance to a wide range of everyday chemicals and cleaning agents at ambient temperature

Materials	Resistance to chemical attack		Comments
	20°C	60°C	
<b>Water</b>	Good	Good	
<b>Sea Water</b>	Good	Good	
<b>Common Detergents (liquid)</b>	Good	Good	
<b>Sodium Chloride (common salt)</b>	Good	Good	
<b>Diesel oil</b>	Good	Limited	Tests refer to 'full immersion'
<b>Petroleum (Gasoline)</b>	Limited	Not satisfactory	Tests refer to 'full immersion'
<b>Alcohol (40% ethanol)</b>	Good	Limited	Tests refer to 'full immersion'
<b>Alkalis and acids</b>	Good	-	Contact gop for information