

# Polyethylene Naphthalate

This polymer is a great substitute for the aluminium however due to its high tensile strength it now distorts on the flat bottom.

To counteract this distortion I shall round the base.

PEN comes in many forms, however I would look to use its granular form for blow moulding.



UV degradation is low.



Does not need paint or coating. It can be coloured with dye during processing

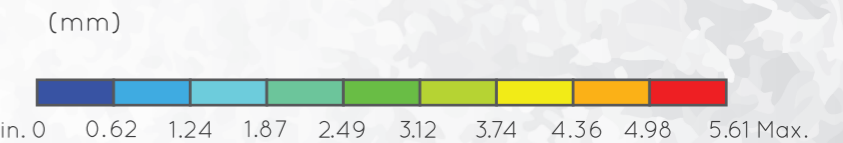
PEN



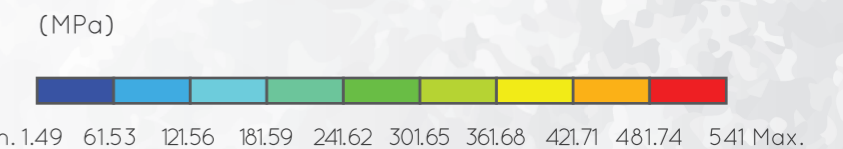
Safety Factor



Total Deformation



Equivalent Stress (Von Mises)



	Aluminium 6061 - T6	Polyethylene Naphthalate
Tensile Yield Strength	276 MPa	550 MPa
Modulus of Elasticity	68.9 GPa	12.2 GPa
Poisson's Ratio	0.33	0.44
Density	2.7 g/cc	2.7 g/cc

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