



# PRIME TUFF-X

Prime TUFF-X is a mineral filled copolymer Polypropylene that offers very high stiffness when rigidity is important. Prime TUFF-X has a very low C.L.T.E., excellent cold temperature impact, UV protection, improved rigidity and has high chemical resistance.

Property	Unit	ISO	Value
<b>PHYSICAL</b>			
Density	g/cc	1183	1.08
Shrinkage	%		0.6-0.8
Melt Flow (230°C/2.16kg)	g/10min	1133	0.5
<b>MECHANICAL</b>			
Stress at break	MPa	50mm/min	527
Ultimate elongation	%	50mm/min	527
Flexural Modulus	MPa		178
Charpy Impact, notched	kJ/m <sup>2</sup>	23°C	180/A
		-20°C	26
<b>THERMAL</b>			
HDT@0.45MPa	°C		75
CLTE(-30 °C to 100 °C)	mm/mm/°C	ASTM E831	128
<b>FLAMMABILITY RATING</b>			
Horizontal burn	1.5mm+	UL94	0.00006
			HB

## Finishing

Aluminium tool construction is recommended with a temperature control function to ensure consistent moulding & finished part dimensional tolerances. A constant tool temperature (typically 75°C for PRIME TUFF-X) should be maintained throughout the production run. Cooling using air or water spray will speed up the cooling cycle to provide efficient production output. Once removed from the tool, it is recommended that the component is clamped in a frame for a short period to optimise dimensional stability & reduce the risk of warping. Shrinkage rates are available on application.

## Colour, Textures, Capabilities

PRIME TUFF-X is available in a full range of colours (subject to minimum order quantities) either colour matched to specific colour references, or to customer sample. A range of more standard colours is available for non-specific requirements. PRIME TUFF-X is available with a smooth or with a textured finish. Emboss swatches are available on request.

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