

# TOUGH GREY 10

## Production Rigid

High speed material for the production of rigid parts

*Simulating a dark grey ABS, the Tough Grey 10 has strong stability and durability for a range of applications.*



## Benefits

- Available very fast – up to 100mm/hour print speed
- Extremely stable, including in high-humidity conditions
- Durable – high elongation at break

## Applications

- Rapid design iteration
- Strong functional parts for:
  - Automotive styling parts
  - Form, fit and function testing
  - Durable assemblies and snap fits
  - Bezels, covers, cases
  - Master patterns for RTV moulding or other uses
- Short-run manufacturing of rigid parts
- Consumer goods
- Ready for painting or plating



## Physical Properties

Colour	Dark Grey
Type	ABS

## Liquid Material

Solid Density (@ 25°C)	1.11g/cm <sup>3</sup>
Layer Thickness (mm)	0.05

## Mechanical Properties

		TEST/ISO
Tensile Strength (MPa)	50	ASTM D638
Tensile Modulus (MPa)	2180	
Elongation at Break (%)	25	
Elongation at Yield (%)	4	
Flexural Strength (MPa)	75	ASTM D790
Flexural Modulus (MPa)	2070	
Notched Izod Impact Strength (J/m)	29	ASTM D256
Unnotched Izod Impact Strength (J/m)	598	ASTM D4812
<b>Heat Deflection Temperature (°C)</b>		ASTM D648
@ 0.45 MPA	59	
@ 1.82 MPA	51	
<b>Co-efficient of Thermal Expansion (ppm/°C)</b>		ASTM E831
<T <sub>g</sub>	93	
>T <sub>g</sub>	165	
Glass Transition (T <sub>g</sub> )	58	DMA, E''
Shore Hardness	81D	ASTM D2240
Water Absorption (%)	<b>0.34</b>	ASTM D570

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