

# ABS-M30

ABS-M30 is up to 25 to 70 percent stronger than standard ABS and is an ideal material for conceptual modeling, functional prototyping, manufacturing tools and end-use-parts.

ABS-M30 has greater tensile, impact and flexural strength than standard ABS. Layer bonding is significantly stronger than that of standard ABS, for a more durable part.

This results in more realistic functional tests and higher quality parts for end use. ABS-M30 parts are stronger, smoother and have better feature detail.

Mechanical Properties	Test Method	Metric XZ Axis	Metric ZX Axis
Tensile Strength, Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	31 MPa	26 MPa
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	32 MPa	28 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	2,230 MPa	2,180 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	7%	2%
Tensile Elongation at Yield (Type 1, 0.125", 0.2"/min)	ASTM D638	2%	1%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	60 MPa	48 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	2,060 MPa	1,760 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	4%	3.5%

Thermal Properties	Test Method	Metric
Heat Deflection (HDT) @ 66 psi, 0.125" unannealed	ASTM D648	96°C
Heat Deflection (HDT) @ 264 psi, 0.125" unannealed	ASTM D648	82°C
Vicat Softening Temperature (Rate B/50)	ASTM D1525	99°C
Glass Transition (Tg)	DSC (SSYS)	108°C
Coefficient of Thermal Expansion (flow)	ASTM E831	8.82 <sup>-05</sup> mm/mm/°C
Coefficient of Thermal Expansion (xflow)	ASTM E831	8.46 <sup>-05</sup> mm/mm/°C
Melting Point	Not Applicable	Not Applicable