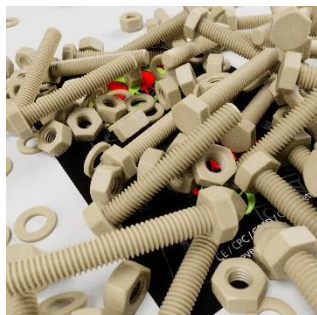


Glass Fibre Reinforced Polyamide (MXD6) — Screws & Bolts



Glass fibre-reinforced MXD6 polyamide combines high tensile and flexural strength with excellent stiffness and dimensional stability. It maintains performance under load and temperature and offers good chemical resistance, making it suitable for precision fasteners in demanding environments.

Key specifications

Continuous Use Temperature	Flame Retardant Rating	Moisture Absorption (24 h)	Mould Shrinkage
105 °C / 221 °F	UL 94 HB	0.14 %	0.40 %

Torsional fracture torque (Nm)

Head type	M2	M3	M4	M5	M6	M8	M10	M12
Hexagon Head	0.08	0.31	0.71	1.46	2.47	6.05	12.07	21.14
Hex Socket Head	0.08	0.32	0.74	1.52	2.57	6.30	12.57	22.02
Crosshead Countersunk Head	0.09	0.33	0.76	1.56	2.64	6.48	12.91	22.61
Pan Head	0.09	0.33	0.75	1.54	2.60	6.39	12.74	22.32

Tensile fracture load (N)

Head type	M2	M3	M4	M5	M6	M8	M10	M12
Head-agnostic	740	1321	2055	2813	4760	5950	10730	15590

Material properties — MXD6 GF

Property	Test method	Value	Unit
Tensile strength	ASTM D638	285	MPa
Tensile modulus	ASTM D638	19.6	GPa
Flexural strength	ASTM D790	380	MPa
Flexural modulus	ASTM D790	17.4	GPa
Compressive strength	ASTM D695	256	MPa
Rockwell hardness (M)	ASTM D785	111	—
HDT (1.8 MPa)	ASTM D648	234	°C
Dielectric strength	ASTM D149	32.2	kV/mm
Dielectric constant (1 MHz)	ASTM D150	4.7	—
Dissipation factor (1 MHz)	ASTM D150	0.016	—
Arc resistance	ASTM D495	129	s

Notes

- Values are reference data for guidance only and are not guaranteed.
- Use a torque wrench; recommended tightening torque is approximately 50% of the listed breaking torque.
- When using bolts with nuts, use bolts and nuts of the same material.
- Keep the bolt end flash (end stump) length $L \leq 5\%$ of total bolt length.