

Diode Trading EST supplies engineering plastic sheets, rods, round bars and tubes, and machines finished components to customer drawings. This datasheet gives typical properties for the standard grades we supply across Saudi Arabia and the GCC.

Typical Properties by Material

Material	Density g/cm ³	Tensile MPa	Service °C	Colours	Typical Uses
UHMWPE	0.93–0.94	20–40	-200 to +80	Natural, green, black	Conveyor wear strips, liners, chain guides, bushes
HDPE	0.95–0.96	22–30	-40 to +80	Natural, black, colours	Tanks, cutting boards, chemical-resistant parts
PP (homopolymer)	0.90–0.91	30–35	0 to +90	Natural, black, white	Chemical tanks, plating lines, fabrication
Nylon PA6 / PA66 (cast & extruded)	1.14	70–80	-30 to +100	Natural, black, blue	Gears, wheels, bushes, rollers
POM (acetal)	1.41	60–70	-40 to +100	Natural, black	Precision gears, bearings, machined parts
PVC (rigid)	1.38–1.45	45–55	0 to +60	Grey	Tanks, ducting, chemical equipment
PC (polycarbonate)	1.20	60–65	-40 to +115	Clear, coloured	Machine guards, glazing, sight glasses
PET	1.38–1.40	75–80	-20 to +100	Natural, black	Wear parts, food-contact components
ABS	1.04–1.06	38–45	-20 to +80	Natural, black	Housings, fabrication, vacuum forming
PEEK	1.30–1.32	90–100	up to +250	Natural, beige	High-temperature seals, bushes, insulators
PVDF	1.76–1.78	45–55	-30 to +140	Natural white	Aggressive chemicals, semiconductor, pumps
PTFE	2.14–2.20	20–30	-200 to +260	White, grey, filled grades	Seals, gaskets, bearings, linings
Phenolic / Bakelite	1.3–1.4	70–100	up to +120	Brown, black	Insulation panels, gears, wear parts
Glass-epoxy (G10 / FR4)	1.8–1.9	300+	up to +130	Green, natural	Electrical insulation, structural parts
Acrylic (PMMA)	1.18–1.20	65–75	-40 to +80	Clear, coloured	Displays, guards, signage
PU (polyurethane)	1.1–1.25	Shore A 80–95	-30 to +80	Amber, colours	Wheels, rollers, liners, seals

Products Supplied by Material

Material	Products Supplied
UHMWPE	Rods, sheets, bushes, guides, profiles / rollers / pulleys, machined and moulded components
HDPE	Rods, sheets, welding rods, fabricated tanks, machined and moulded components
Polypropylene (PP)	Rods, sheets (black / white), welding rods, corrugated sheets, fabricated tanks, machined components
Nylon (cast & extruded polyamide)	Rods, sheets, bushes, tubing, wheels / rollers / pulleys / gears, machined and moulded components
POM (polyacetal)	Rods, sheets, bushes, gears, machined components
PVC (rigid & flexible)	Rods, rigid sheets, welding rods, foam sheets, flexible rolls (transparent / grey / yellow), curtain rolls (clear / red), machined components
Polycarbonate	Rods, pipes, solid clear sheets, multiwall sheets (transparent / coloured), machined and fabricated components
Acrylic	Rods, sheets (transparent / coloured), pipes, display folders, boxes and podiums, machined and buffed items
PEEK	Rods, sheets, bushes, gears, machined and fabricated components
PTFE	Virgin, glass, carbon, graphite and bronze filled: rods, sheets, tapes, bushes, tubing, balls, Turcite-type sheet, expanded PTFE, gland packing, envelope gaskets, compressor piston guide rings, dimpled sheets, machined components
PVDF / PET / ABS	Rods, sheets, bushes and machined components

Material	Products Supplied
Phenolic (Bakelite)	Paper and fabric phenolic sheets, rods, bushes, tubes, gears, machined items
Glass-epoxy	Rods, sheets, tubes, machined and fabricated items
Polyurethane (PU)	Rods, sheets, bushes, tubing / cords, strips, wheels, rollers, moulded components

Supply Forms

Sheets	Typically 1000 × 2000 mm and 1220 × 2440 mm; thickness about 1 mm to 100 mm depending on material; cut to size
Rods / Round Bars	Typically 1 m to 3 m lengths; diameters about 6 mm to 300 mm depending on material
Tubes / Bushes	Hollow bars and finished bushes to size
Machined Parts	Gears, wheels, rollers, pulleys, bushes, liners, guides and custom components to drawing
Documents	Material test certificate on request

Notes

Different product lines are not interchangeable: UHMWPE sheets and rods, HDPE sheets and rods, and UHMWPE outrigger pads are separate products with separate datasheets. For PTFE grades see the PTFE Technical Datasheet; for crane outrigger pads see the SafeRig™ datasheet.

Notice: Values are typical and indicative, based on common industry grades. Exact grade, size, tolerance and performance are confirmed on quotation and against the supplier or manufacturer data and material test certificate for each batch. This sheet is not a warranty. Contact Diode Trading EST to confirm availability and specification for your application.