

Ensinger Guide to Plastic Stock Shapes

Plastic Material	Shape Availability		Machinability	Service Temp	Characteristics / Attributes
	Rod	Sheet	Rating 1-10	Long/Short	
	Dia	Thickness	1=Easy	Degrees F	
ABS / TECARAN	3/16 to 8	1/4 to 4	1	195/210	General Purpose / Economical / Machinable / Moldable / Formable
ACETAL / DELRIN / TECAFORM	1/8 to 12	.010 to 4	1	180/220	Machinable / Economical / Good Wear / FDA / USDA / Good Impact
ACRYLIC	1/16 to 6	1/32 to 3	5	140/200	Optically Clear / Colors / Machinable / Formable / Economical
CELAZOLE / PBI	1 to 4-3/4	3/8 to 2	8	650/1000	Highest Temp / Chemical Resistance / High PV / Polybenzimidazole
DELIRIN / HOMOPOLYMER / TECAFORM	3/16 to 8	1/4 to 4	1	180/220	Acetal / Economical / Good Wear / FDA / USDA / Machinable
DELIRIN AF	3/16 to 8	1/32 to 3	1	185/300	PTFE Filled Acetal / Low Friction / Brown / Good Machinability
DELIRIN CL500	3/16 to 8	1/4 to 3	1	180/220	Excellent Machinability / Lubricated Acetal / Low Friction
ENSIFIDE BG / Bearing Grade PPS	3/16 to 8	1/4 to 2	3	425	High Strength / Rigidity / Excellent Chemical Resistance
ENSITAL HPV13	3/16 to 8	1/4 to 4	1	180/220	Filled Acetal / Low Moisture Absorption / Wear Resistant
ENSITEP / TECADUR	3/16 to 8	1/4 to 4	1	210/260	PET / Economical / Good Wear / White / FDA / USDA / Machinable
FEP	1/16 to 6	.005 to 3	3	400	Fluoropolymer / Excellent Chemical Resistance / High Temperature
FLUOROGOLD	1/32 to 15	1/32 to 4	3	500	Filled PTFE / Lowest Friction / High V / Chemical Resistant
HYDEX 4101 & 4101L* / PBT	1/2 to 6	3/8 to 4	1	245/250	PBT / PTFE Filled* / FDA-USDA / Low Friction / White / Good Wear
HYDEX FGA	1/2 to 4	3/8 to 2	1	185/300	Teflon Filled Delrin / FDA / USDA / Low Friction / Machinable
HYDLAR Z & ZF* / KEVLAR FILLED NYLON	1/4 to 5	1/4 to 2	5	230/300	Kevlar - Aramid Fiber Filled Nylon / Excellent Wear / FDA / *MoS2 Filled
KYNAR / PVDF / TECAFON	1/4 to 10	1/4 to 4	3	122/230	Fluoropolymer / Excellent Chemical Resistance / Weldable
MICARTA C & L	1/32 to 10	1/32 to 8	8	284/350	Laminate / Thermo-set / Rigid / High Strength / Electrical Insulator
MICARTA G-9, G-10 & G-11*	1/32 to 5	.005 to 5	10	284/356	Epoxy / Silicone* / Woven Fiberglass Matrix / High Strength Laminate
MICARTA XXX	1/32 to 2	1/32 to 5	8	284/350	Phenolic Resin / Paper Matrix / Laminate / Excellent Insulator
NORYL EN265	3/8 to 8	1/4 to 4	2	195/375	PPO & Styrene Alloy / Good Creep Resistance / Machinable
NYLON - GLASS FILLED / 10% to 30%	1/32 to 6	.125 to 3	3	200/250	Economical / Good Wear / High Impact Strength / High Strength
NYLON TYPE 6/6 / EXTRUDED / TECAMID	1/32 to 6	.010 to 3	1	200/250	Economical / Good Wear Characteristics/ High Impact Strength
NYLON TYPE 6 / MONOCAST / TECAST	1 to 24	1/4 to 4	2	260	Economical / Castable to Near Net Shapes / High Impact Strength
NYLON ST801	1/32 to 6	.010 to 3	1	200	Super Tough Nylon / High Strength / High Impact Strength
PCTFE / KEL-F	1/16 to 6	.005 to 2	3	500	Chemical Resistant / Heat Resistant / High Temp / Weldable
PEEK / POLYETHERETHERKETONE	1/4 to 4	1/4 to 2-1/2	5	480	Autoclavable / Excellent Chemical & Steam Resistant / Machinable
PEEK / CARBON FIBER FILLED	1/4 to 4	1/4 to 2-1/2	5	480	High PV / High Temp / Thermally Stable / Conductive / Rigid
PFA / NEOFロン	1/16 to 3	.002 to 3	3	500	Chemical Resistant / Heat Resistant / High Temp / Weldable
POLYCARBONATE / LEXAN / TECANAT	1/32 to 15	1/32 to 4	3	210/265	Good Machinability / Transparent / High Impact and Rigidity
POLYETHYLENE / LDPE, MDPE & HDPE	1/32 to 18	.002 to 10	1	140/175	General Purpose / Economical / Chemical Resistant / Weldable
POLYIMIDE / 15% GRAPHITE 10% TFE	1 to 4-3/4	3/8 to 2	7	550	High PV / High Temp / Low Friction / Chemical Resistant
POLYIMIDE / 15% GRAPHITE FILLED	1 to 4-3/4	3/8 to 2	7	550	High PV / High Temp / Low Friction / Chemical Resistant
POLYIMIDE / MELDIN	1 to 4-3/4	3/8 to 2	7	600	High Temp / Wear Resistance / High PV / Low Outgassing
POLYPROPYLENE / TECAFINE PP	1/4 to 16	.010 to 10	1	160/230	Chemical Resistance / Weldable / Economical / Moldable
POLYSULFONE / UDEL / TECASON S	3/16 to 8	1/4 to 4	1	300/340	Autoclavable / Chemically Resistant / Heat Resistant / Moldable
POLY-TEXX® XP-99	1/2 to 6	1/4 to 2	5	480	High PV / High Temp / Chemical Resistant / Thermally Stable
POLY-TEXX® 350	1/2 to 4	1/8 to 2	3	200/250	Highest Abrasion Resistance / Low Friction / Excellent Wear
POLY-TEXX® HPVO	Tubing to 60	1/8 to 3	3	266/360	High Load / Impact Resistant / OIL Filled Composite Bearing
POLY-TEXX® HPVG	Tubing to 60	1/8 to 3	3	266/360	High Load / Impact Resistant / Graphite Filled Composite Bearing
POLY-TEXX® HPVТ	Tubing to 60	1/8 to 3	2	266/360	Lowest Friction / High Load / PTFE Filled Composite Bearing
PTFE / 15% GRAPHITE FILLED	1/32 to 15	1/32 to 4	3	500	Filled PTFE / Low Friction / Chemical / Economical / Moldable
PTFE / 25% CARBON FILLED	1/32 to 15	1/32 to 4	3	500	Filled PTFE / Low Friction / Conductive / Chemical Resistant
PTFE / 25% GLASS FILLED	1/32 to 15	1/32 to 4	3	550	Filled PTFE / High V / High Temp / Chemical Resistant / Insulator
PTFE /	1/32 to 15	1/32 to 4	3	550	High Chemical Resistance / High Temp / Low Heat Transfer
PVC / CPVC*	1/4 to 13-3/4	3/32 to 4	1	150/165	Weldable / Economical / Chemical Resistant / Moldable / Hi Temp*
RULON® 123	3/16 to 13	.010 to 2	3	550	Graphite Filled PTFE / FDA / USDA / High V / Inert / Black
RULON® 142	N/A	.015 to 1/4	1	550	Filled PTFE / Slide ways / Machine Ways / Expansion Supports
RULON® 488	3/16 to 12	.015 to 1	3	550	Filled PTFE / High V / Chemically Inert / Dryer Bearings / Green
RULON® 641	3/16 to 12	.015 to 1	3	550	Filled PTFE / FDA / USDA / High V / Chemical Resistant / White
RULON® 988 / FLUOROLOY A	3/16 to 13	.010 to 4	5	500	Filled PTFE / Stability / Strength / High V / Low Friction
RULON® DC7035	3/16 to 13	.010 to 4	5	500	Carbon Filled PTFE / Conductive / High V / Chemical Resistant
RULON® J	3/16 to 13	.010 to 4	3	550	Polymer Filled PTFE / Low Friction / Non Abrasive / Chem. Resistant
RULON® K / FLUOROLOY K	3/16 to 13	.010 to 4	5	500	Filled PTFE / Stability / Seals / High V / Chemical Resistant
RULON® LR / AR	3/16 to 13	.010 to 4	5	550	Glass Filled PTFE / Good Strength / High V / Inert / Maroon
RULON® W2	3/16 to 13	.010 to 4	5	500	Filled PTFE / Water Applications / High V / Chemical Resistant
POLY-TEXX XP-154 / FILLED POLYIMIDE	1/4 to 3	1/4 to 2	4	650	High PV / Very High Temp / Chemical Resistant / Excellent Bearing
POLY-TEXX XP-156 / FILLED POLYIMIDE	1/4 to 3	1/4 to 2	4	550	High PV / High Temp / Low Friction / Chemical Resistant
TECHTRON / PPS	1/4 to 3	1/4 to 2	4	425	Chemical Resistant / High Temp / High Strength / Rigid
PPS - BEARING GRADE	1/4 to 3	1/4 to 2	4	425	Graphite Fill / Chemical Resistant / High Temp / High Strength & Rigid
PTFE / EXT & MOLDED	1 to 38	.001 to 12	3	550	Unfilled PTFE / Inert / High Temp / Insulator / White
PTFE / GLASS FILLED	1/4 to 12	1/4 to 4	5	550	Filled PTFE / High V / High Temp / Chemical Resistant
PTFE / TUBING	.034 to 12	N/A	N/A	550	Roll Covers / Spaghetti / Shrinkable and Non-Shrinkable / AWG Sizes
TEFZEL / ETFE	1/16 to 3-3/4	.030 to 3	3	300/350	Fluoropolymer / Excellent Chemical Resistance / High Strength
TFM / MODIFIED PTFE	1 to 12	.010 to 4	3	500	Fluoropolymer / Very Low Porosity / High Temperature
TORLON 4203 / 4301 / TECATOR	3/32 to 2	3/16 to 1	5	500	High Temp / High Strength / Electrical & Bearing Grade
UHMW	1/4 to 30	.005 to 7	5	180	Economical / High Abrasion Resistance / Low Friction / FDA
UHMW / GLASS FILLED	1/2 to 30	1/8 to 2	3	180	Low Friction / Highest Abrasion Resistance / Economical
UHMW / OIL FILLED	1/4 to 8	1/8 to 2	3	180	Lowest Friction / High Abrasion Resistance / FDA / Chemical Res.
UHMW / H.O.T.	1 to 8	1/4 to 4	2	260	Low Friction / Highest Heat Resistance of any UHMW / Economical
ULTEM 1000	1/32 to 8	.002 to 4	5	340	High Strength / Autoclavable / Chemical Resistance / Translucent
ULTEM 2300	1/4 to 8	3/8 to 4	8	340	Glass Filled / High Strength / Rigid / Autoclavable / Thermally Stable
VEKTON 6PAL, 6PAG, / TECAST	1/2 to 12	1/4 to 6	3	200/250	Oil & MoS2 Filled Nylon Type 6 / Low Friction / Good Wear
VEKTON 6PALM / TECAST	1/2 to 12	1/4 to 6	3	200/250	High Impact / Oil Lubricant Filled Nylon Type 6 / Low Friction
VEKTON 6PAM, 6PA / TECAST	1/2 to 12	1/4 to 6	3	200/250	MoS2 Filled Nylon Type 6 / Economical / High Strength
VEKTON 6XAU / TECAST	1/2 to 12	1/4 to 6	3	260/300	Oil & MoS2 Filled Nylon Type 6 / High Temp / Good Wear
VHMW	N/A	1/8 to 3/4	5	160/180	Good Abrasion Resistance / Machinable / Low Friction / Economical