

T-LON® Material Specification Tables



Material	Properties Color	Tensile Strength (PSI) ASTM D4894/D4745	Elongation (%) ASTM D4894/D4745	Specific Gravity ASTM D4894/D4745	Hardness Shore D ASTM D2240	Wear Resistance (1-5)	Extrusion Resistance (1-5)	Compliance (FDA or USP Class VI)	Dynamic Surface Abrasion (Relative)	Recommended Mating Surface Hardness, HRc (Dry)	Typical Applications / Sealing Mode (Static, Reciprocating, Rotary)
						1=Fair / 5=Excellent					
T-Lon-01 100% Virgin PTFE	White	4500	300	2.16	54	1	1	FDA USP Class VI	Very Low	Any	Static Food Processing Static Seals/Gaskets O-ring Back-up Rings Cryogenics
T-Lon-02 Aqua-pigmented PTFE	Aqua	5000	300	2.16	56	2	1	FDA	Low	>25	Reciprocating Slow Dynamic Seals Pneumatic Seals
T-Lon-03 15% Glass Filled PTFE	Gold	3200	250	2.20	58	3	2	No	Moderate	>60	Reciprocating Hydraulic Piston Seals Reciprocating Seals Transmission Seals
T-Lon-04 T-SMART® PTFE	White	4500	400	2.17	57	2	2	FDA	Very Low	Any	Static 90% SNAP-BACK Low Permeability Low Permanent DuL Static Seals/O-rings Slow Dynamic Seals
T-Lon-06 15% Glass Filled PTFE	White	3200	250	2.20	58	3	2	No (FDA available upon request)	Moderate	>60	Reciprocating Hydraulic Piston Seals Reciprocating Seals Transmission lip seals
T-Lon-09 25% Glass Filled PTFE	Blue	2600	230	2.22	60	4	3	No	High	>60	Reciprocating Hydraulic Piston Seals Reciprocating Seals
T-Lon-11 25% Glass Filled PTFE	White	2600	230	2.22	60	4	3	No (FDA available upon request)	High	>60	Reciprocating Hydraulic Piston Seals Reciprocating Seals O-ring Back-up Rings
T-Lon-15 25% Carbon Graphite Filled PTFE	Black	2200	130	2.06	63	4	5	No	Moderate	>50	All Elevated Temperature Resistance High Wear/Extrusion Resistance Dry/Wet/Steam/Corrosive App's High Pressure Dynamic Seals
T-Lon-16 15% Graphite Filled PTFE	Black	2600	180	2.13	58	2	2	No	Low	>25	Reciprocating Guide Rings and Dynamic Seals (Soft Metal Counterfaces) Pneumatic Seals Dry/Wet/Steam/Corrosive App's
T-Lon-18 Carbon Fiber Filled T-SMART	Black	2500	40	2.05	65	5	5	No	High	>60	All Elevated Temperature Resistance High Wear/Extrusion Resistance Formulated for High Pressure Rotary Swivel Seals Not For Sealing Gasses
T-Lon-19 5% Glass 5% Moly Filled PTFE	Dark Grey	3800	300	2.24	58	3	2	No	Moderate	>50	Rotary Lip Seals High Speed Rotary Seals
T-Lon-21 40% Bronze Filled PTFE	Bronze	3500	180	3.08	60	3	3	No	Low	>45	Reciprocating Hydraulic Piston Seals Reciprocating Seals Slow Rotary Seals Improved Static Sealing



1110 Richards Rd • Hartland, WI 53029
Telephone 262 / 367-2333 • FAX 262 / 367-8159

T-LON® Material Specification Tables



Material	Properties	Color	Tensile Strength (PSI) ASTM D4894/D4745	Elongation (%) ASTM D4894/D4745	Specific Gravity ASTM D4894/D4745	Hardness Shore D ASTM D2240	Wear Resistance (1-5)	Extrusion Resistance (1-5)	Compliance (FDA or USP Class VI)	Dynamic Surface Abrasion (Relative)	Recommended Mating Surface Hardness, HRC (Dry)	Typical Applications / Sealing Mode (Static, Reciprocating, Rotary)	
	1=Fair / 5=Excellent												
T-Lon-22 60% Bronze Filled PTFE		Bronze	2800	120	3.93	66	4	5	No	Low	>45	Reciprocating	Hydraulic Piston Seals High Extrusion Resistance Reciprocating Seals Slow Rotary Seals
T-Lon-24 55% Bronze 5% Moly Filled PTFE		Dark Bronze	2500	120	3.60	65	4	4	No	Low	>45	Reciprocating	Compressor Piston Seal Reciprocating Seal Slow Rotary Sealing Improved Dry Running
T-Lon-31 15% Glass 5% Moly Filled PTFE		Dark Grey	3100	200	2.26	58	4	3	No	Moderate	>60	Reciprocating	Hydraulic Piston Seals Hydraulic Swivel Seals Thrust Washers Reciprocating and Slow Rotary Seals
T-Lon-34 Aromatic Polyester Filled PTFE		Beige	3100	300	2.09	58	4	3	FDA	Low	Any	All	Low Abrasiveness Reciprocating Seal Slow Rotary Sealing Not intended for Steam > 250°F
T-Lon-36 15% Carbon Graphite Filled PTFE		Black	3000	200	2.11	62	4	3	No	Moderate	>50	Reciprocating	Good Wear Resistance Dry/Wet/Steam/Corrosive App's Guide Rings and Dynamic Seals Shock-absorber Piston Seals
T-Lon-37 Polyimide Filled PTFE		Tan	3000	225	1.99	57	3	3	FDA*** ***<212°F	Very Low	Any	Reciprocating	Low Abrasiveness Reciprocating Seals Rotary Seals Very Low Friction
T-Lon-39 PPS Filled PTFE		Brown	3200	290	2.06	60	3	3	FDA	Very Low	Any	Reciprocating	Low Abrasiveness Reciprocating Seal Rotary Sealing Very Low Friction
T-Lon-41 Mineral/MoS2 Filled PTFE		Dark Grey	3200	250	2.21	61	4	3	No	Low	>45	All	High Speed Rotary Seals Improved PV Rating Pneumatic Piston/Rod Seals
T-Lon-45 Glass/Carbon Modified PTFE		Black	2400	40	2.12	60	4	4	No	High	>60	Reciprocating	Steam Applications High Temperature High Wear Resistance Improved Resiliency
T-Lon-49 50% Stainless Steel Modified PTFE		Grey	2600	185	3.31	65	3	4	USP Class VI	Moderate	>60	Static	Magnetic (Metal Detectable) Sanitary Gasket Static Seals
T-Lon-53 Modified PTFE		Transparent White	4500	450	2.17	57	1	2	FDA USP Class VI	Very Low	Any	Static	Food Processing FDA/NSF Cryogenics and Static Seals Improved Resiliency
T-Lon-59 15% Mineral Filled PTFE		Cream	3200	275	2.20	61	3	3	FDA	Moderate	>45	Reciprocating	Filling Equipment / Mixer Seals Dynamic Seals for FDA
T-Lon-75 Carbon Fiber Filled PTFE		Brown	3400	225	2.08	63	5	4	No	High	>50	Reciprocating	High Wear Resistance Dry/Wet/Steam/Corrosive App's Not For Sealing Gasses

T-LON® Material Specification Tables



Material	Properties	Color	Tensile Strength (PSI) ASTM D4894/D4745	Elongation (%) ASTM D4894/D4745	Specific Gravity ASTM D4894/D4745	Hardness Shore D ASTM D2240	Wear Resistance (1-5)	Extrusion Resistance (1-5)	Compliance (FDA or USP Class VI)	Dynamic Surface Abrasion (Relative)	Recommended Mating Surface Hardness, HRc (Dry)	Typical Applications / Sealing Mode (Static, Reciprocating, Rotary)
							1=Fair / 5=Excellent					
T-Lon-81 25% Glass T-SMART® PTFE		Blue	2600	300	2.24	60	4	4	No	High	>60	Reciprocating Improved SNAP-BACK Hydraulic Piston Seals Reciprocating Seals Static Sealing Gaskets
T-Lon-A5 High-fill Polyimide Filled PTFE		Tan	2000	180	1.95	59	4	4	FDA*** ***<212°F	Very Low	Any	Reciprocating Low Abrasiveness High Cycle Reciprocating Seals No-lube Air Compressor Seals Very Low Friction
T-Lon-D1 Polyimide T-SMART® PTFE		Tan	3000	250	1.99	57	3	3	FDA*** ***<212°F	Very Low	Any	All Improved SNAP-BACK Low Abrasiveness Reciprocating Seal High Speed Rotary Sealing (Soft Metal Counterfaces)
T-Lon-D2 PPS/Carbon/ MoS2 Filled PTFE		Black	2200	150	1.92	62	5	4	No	Moderate	>50	Reciprocating No-lube Reciprocating Seals Air Compressor Piston Seals Thrust Washers
T-Lon-D4 40% Bronze T-SMART® PTFE		Yellow Bronze	3500	300	3.08	63	3	4	No	Low	>45	Reciprocating Improved SNAP-BACK Hydraulic Piston Seals (No Resizing) Improved Static Sealing
T-Lon-D5 Mineral/MoS2 T-SMART® PTFE		Dark Grey	3000	300	2.26	62	4	4	No	Low	>45	All Improved SNAP-BACK High Speed Rotary Seals Improved PV Rating Pneumatic Piston Seals Low Molecular Weight Gasses
T-Lon-D9 Carbon Filled T-SMART® PTFE		Black	2900	250	2.13	63	4	4	FDA	Low	>45	All Improved SNAP-BACK High Speed Rotary Seals Improved PV Rating Pneumatic Piston Seals
T-Lon-E5 Proprietary Stainless Steel Modified PTFE		Dark Blue	2000	150	3.20	64	3	4	USP Class VI	Moderate	>60	Static Mos: Sensitive to X-ray Inspectable and Metal Detectable Sensors Sanitary Gasket Static Seal
T-Lon-E6 PPS/Carbon/ Graphite Filled PTFE		Black	2700	200	1.98	61	5	4	No	Moderate	>50	Rotary Highest PV Rating for Rotary Seals High Speed / High Pressure Spring Energized Seals Low Friction Lip Seals
T-Lon-E7 15% Glass / 5% MoS2 T-SMART® PTFE		Dark Grey	3000	350	2.25	62	4	4	No	Moderate	>60	Reciprocating Improved SNAP-BACK Hydraulic Piston Seals (No Resizing)

T-LON® Material Specification Tables



Material	Properties	Color	Tensile Strength (PSI) ASTM D638	Elongation (%) ASTM D638	Specific Gravity ASTM D792	Hardness Shore D ASTM D2240	Wear Resistance (1-5)	Extrusion Resistance (1-5)	Compliance (FDA or USP Class VI)	Dynamic Surface Abrasion (Relative)	Recommended Mating Surface Hardness, HRC (Dry)	Typical Applications / Sealing Mode (Static, Reciprocating, Rotary)
PEEK Compounds												
T-Lon-90 15% PTFE / 15% Graphite Filled PEEK		Black	7500	4	1.46	80	4	>5	No	Low	>45	Extreme Pressures Back-up Rings Non-abrasive/No-lube Applications.
T-Lon-91 3% PTFE / 15% Graphite / 1% Silicone Filled PEEK		Black	7000	5	1.41	86	3	>5	No	Low	>45	Extreme Pressures Back-up Rings
T-Lon-92 10% PTFE / 10% Carbon / 10% Carbon Fiber Filled PEEK		Black	7500	2	1.44	86	4	>5	No	Moderate	>60	Extreme Pressures Back-up Rings Improved Wear Resist.
T-Lon-95 30% Carbon Fiber Filled PEEK		Black	16000	3	1.41	90	5	>5	FDA	Moderate	>60	Best High Temp. Compression Strength Extreme Pressures Improved Wear Resist. Back-up Rings / Guide Rings
T-Lon-99 Virgin PEEK		Beige	16000	40	1.31	85	2	>5	FDA	Low	>45	Static Extreme Pressures Back-up Rings Static Spring Energized Seals
Additional Compounds												
T-Lon-UH Virgin UHMW-PE		White	6400	350	0.94	67	4	4	FDA	Very Low	Any	Reciprocating Reciprocating or Slow Rotary Seals Abrasive/Water Media Max. Temp 180°F

