

EMEAI Product Selection Guide



# TPU FOR FILM AND SHEET

*Lubrizol*

Engineered Polymers

# TPU (THERMOPLASTIC POLYURETHANE)

## FOR FILM AND SHEET

### EMEI Product Selection Guide

Grades	TPU Polyol Type	Hardness (Shore A/D) ISO 868	Key benefits	Tensile Strength (MPa) ISO 527-2/5A/500	Elongation at break (%) ISO 527-2/5A/500	Tear Resistance (kN/m) ISO 34-1B		Minimum Extrusion Temperature* (°C)	MFI (g/10 min) ISO 1133	MFI Conditions	Main Applications
						Nicked	Unnicked				
ESTANE® 58125 NAT 055	Polyether	77A	Low temperature flexibility, breathability, high grip	22	775	30	-	200	17-32	200°C/3.8 kg	Roofing membranes
ESTANE® 58245 NAT 031	Polyether	82A	Breathable	27	770	35	-	190	15-30	190°C/8.7 kg	Apparel
ESTANE® 58300 NAT 036	Polyether	82A	Low temperature flexibility, wide processing window, UV performance	32	670	40	-	185	30-50	190°C/8.7 kg	Life rafts, roofing membranes
ESTANE® 58315 NAT 055	Polyether	85A	Special UV resistance, WRAS certified**	46	570	55	-	190	10-24	190°C/8.7 kg	Inflatables
ESTANE® 58311 NAT 022	Polyether	87A	General purpose, WRAS certified**	42	655	55	-	190	20-40	210°C/3.8 kg	Inflatables
ESTANE® 58887 NAT 055	Polyether	89A	Special UV resistance, WRAS certified**, MFI ranges available	47	570	65	-	190	25-35***	210°C/3.8 kg	Inflatables, food and elevator belts, roofing membranes
ESTANE® 58237 NAT 024	Polyether	90A	Breathable	42	590	45	-	190	10-30	190°C/8.7 kg	Apparel
ESTANE® ETE 55DT3 NAT 065	Polyether	55D	Low temperature flexibility, high transparency, UV stable	42	470	110	-	210	2-8	210°C/3.8 kg	Profiles
ESTANE® E855AB3	Polyester	55A	Plasticizer free, soft touch, high grip	22	950	40	-	210	15-35	190°C/8.7 kg	High grip belts
PEARLCOAT™ ACTIVA 118K	Polyester	70A	Soft touch, low gloss	30	615	-	45	185	6-15	190°C/5 kg	Film coextrusion (ABS/TPU), automotive interior
ESTANE® 58213 NAT 022	Polyester	76A	Wax-free	25	700	45	-	175	20-60	190°C/8.7 kg	Adhesive film
ESTANE® 58271 NAT 021	Polyester	86A	Wax-free, MFI ranges available	42	650	60	-	185	15-25***	190°C/8.7 kg	Films and food belts, automotive adhesive films
PEARLTHANE™ MAXI 12T85E	Polyester	86A	High-melt strength	54	525	78	-	205	10-25	210°C/3.8 kg	Film coextrusion (ABS/TPU)
ESTANE® 58206 NAT 033	Polyester	87A	High-heat resistance, elasticity	46	600	70	-	195	8-22	210°C/3.8 kg	Films, belting and profiles
ESTANE® 58447 NAT 021	Polyester	90A	High-heat resistance, elasticity	46	540	85	-	205	10-25	210°C/3.8 kg	Epoxy-resistant CIPP liners
ESTANE® 58226 NAT 028	Polyester	92A	Improved hydrolysis and chemical resistance	51	510	78	-	205	8-15	190°C/8.7 kg	Films and belts
ESTANE® 58277 NAT 021	Polyester	93A	Wax-free, MFI ranges available	47	550	100	-	185	10-20***	190°C/8.7 kg	Films and profiles, automotive adhesive films, CIPP liners
ESTANE® 58246 NAT 040	Polyester	95A / 52D	Excellent wear resistance	64	420	140	-	210	10-25	210°C/3.8 kg	Monolithic belts
PEARLCOAT™ DIPP 119	Polycaprolactone	70A	Soft, Flexible	20	750	-	50	170	25-50	190°C/2.16 kg	PVC laminates, adhesives film
PEARLTHANE™ 11T80	Polycaprolactone	82A	Clarity, low density	40	630	-	80	190	55-90	220°C/3.8 kg	Footwear film
PEARLTHANE™ 11T85E	Polycaprolactone	86A	Clarity, low density	35	650	-	90	200	55-90	220°C/3.8 kg	Films, escalator handrails, belts
PEARLTHANE™ 11T92E	Polycaprolactone	93A	Clarity, low density	42	560	-	130	200	55-90	220°C/3.8 kg	Films, escalator handrails, belts
ESTANE® TS 92AP7 NAT 055	Polycarbonate	93A	Excellent heat and chemical resistance	60	375	103	-	210	15-30	210°C/3.8 kg	High performing belts, long term high temperature uses
PEARLTHANE™ CLEAR 15N70	Copolymer	72A	Clarity, elasticity, soft touch	30	710	-	65	190	25-45	210°C/3.8 kg	Automotive
PEARLTHANE™ CLEAR 15N80	Copolymer	82A	Clarity, elasticity	35	740	-	80	210	25-45	210°C/3.8 kg	Films, airport belt profiles
PEARLTHANE™ CLEAR 15N85	Copolymer	86A	Clarity, high puncture resistance	35	600	95	-	230	20-45	210°C/3.8 kg	Films, belts and profiles, barrier film
ESTANE® AG 8451-E	Polyether (aliphatic)	75A	Glass to plastic lamination	48	500	52	-	180	1-12	177°C/2.16 kg	Glass lamination
ESTANE® 96F85	Polyether (aliphatic)	84A	Hydrolytic stability, non-yellowing, excellent transparency	48	347	-	-	180	20-30	190°C/3.8 kg	Film coextrusion
ESTANE® ALR CLC93A-V3	Polycaprolactone (aliphatic)	87A	UV-stabilized, non-yellowing	56	455	-	-	185	1-10	175°C/2.16 kg	Paint protection film
ESTANE® 91F88	Polycaprolactone (aliphatic)	90A	Excellent transparency, non-yellowing	45	500	-	-	185	5-20	170°C/10 kg	Films

\* The minimum temperature that needs to be achieved in the extruder for adequate melting and processing

\*\* WRAS (Water Regulations Advisory Scheme) certified materials with contact to drinking water based on the standard BS6920

\*\*\* Other MFI ranges available

For information on EU and/or FDA food contact compliance, please contact Lubrizol Customer Assistance.

On request, all products may be available in powder form.

Bio TPU by Lubrizol (ESTANE ECO TPU) and biomass balance (ESTANE RNW TPU) products complement the offering for film & sheet, please contact your local representative for more information.



## LUBRIZOL GLOBAL PRESENCE

Our global presence means we have the application and development laboratories (with technical service ability) already in place, as well as worldwide production capabilities and renowned customer service. We are also a specialty producer of performance coatings and other unique products for apparel. Teaming with Lubrizol simplifies a complex global supply chain.

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