



青岛吉盛邦进出口贸易有限公司  
QINGDAO GISONB IMPORT AND EXPORT  
TRADING CO.,LTD

Thermoplastic  
Polyurethane

TPU

Professional Polyurethane Solution Provider

**Polyester-based TPU--Leisure sports**

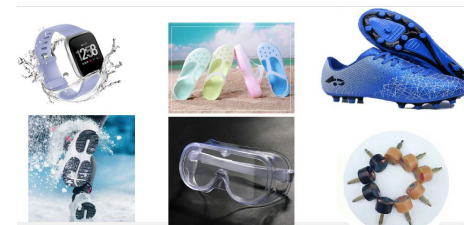
Hardness: Shore A 60 - Shore D 70

Operation: Injection molding

Characteristics: Easy processing, Fast de-molding, Excellent physical properties, Abrasion resistance

Applications: Shoe material, Structural section, Sealing ring, Accessories, Over-molding, Compounding etc.

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	300%模量 300% Modulus	撕裂强度 Tear Strength	加工温度 Processing Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D412	ASTM D624	/
单位 Unit	Shore A	MPa	%	MPa	MPa	KN/m	°C
<b>T3160</b>	62	19	950	3	4	72	150-170
<b>T3165</b>	67	20	900	4	5	75	155-175
<b>T3170</b>	72	22	870	3	4	85	165-185
<b>T3175</b>	75	24	890	4	5	91	170-190
<b>T170</b>	72	30	740	3	7	90	190-210
<b>T175</b>	76	33	700	4	8	95	195-215
<b>T3180</b>	81	27	750	4	7	105	180-200
<b>T3185</b>	86	30	640	5	8	115	185-205
<b>T3190X</b>	91	36	580	10	17	140	200-220
<b>T3198</b>	98	40	520	13	21	160	205-220
<b>T4198</b>	98	42	500	14	25	180	205-220
<b>360D</b>	60D	40	480	17	26	190	205-220
<b>365D</b>	65D	42	450	19	27	200	210-225
<b>371D</b>	70D	45	400	24	30	230	215-230



**Polyester-based TPU-Electronic accessories**

Hardness: Shore A 90 - Shore A 95

Operation: Injection molding

Characteristics: Easy processing, Fast de-molding, Excellent surface performance

Applications: Ultra-thin, Rapid prototyping, High transparency, UV resistance, Over-molding, Electronic accessories etc.

项目 Items	硬 度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	300%模量 300% Modulus	撕裂强度 Tear Strength	加工温度 Processing Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D412	ASTM D624	/
单位 Unit	Shore A	MPa	%	MPa	MPa	KN/m	°C
<b>T3190</b>	93	36	600	9	14	125	200-215
<b>T3195</b>	95	38	540	11	18	135	200-215
<b>T1290</b>	93	36	570	9	15	125	205-220
<b>T1295</b>	95	38	550	11	18	130	205-220
<b>T4290</b>	92	40	580	8	14	130	200-215
<b>T4295</b>	95	41	570	10	16	132	200-220
<b>T4395</b>	97	40	580	12	17	137	200-220
<b>T4295U</b>	95	40	590	10	15	131	200-220



**Polyester-based TPU-Economical parts**

Hardness: Shore A 75 - Shore A 95

Operation: Injection molding

Characteristics: Excellent physical properties, Easy processing, Fast de-molding

Applications: Shoe material, Sealing ring, Plum pad, Tire chains, Electronic accessories etc.

项目 Items	硬 度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	300%模量 300% Modulus	撕裂强度 Tear Strength	加工温度 Processing Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D412	ASTM D624	/
单位 Unit	Shore A	MPa	%	MPa	MPa	KN/m	°C
<b>T3075</b>	76	28	710	4	8	93	185-200
<b>T3375-1</b>	78	20	710	4	6	90	175-195
<b>T3183</b>	83	31	700	5	8	90	170-190
<b>T3088</b>	88	38	580	7	12	116	185-205
<b>T3288</b>	88	36	580	7	11	115	185-205
<b>T3190D</b>	91	40	600	9	16	132	190-210
<b>T3390</b>	92	37	580	8	14	124	200-215
<b>T3393</b>	93	36	560	9	17	130	205-220
<b>T3395</b>	96	39	550	12	18	134	205-220



## Polyester-based TPU-Extrusion series

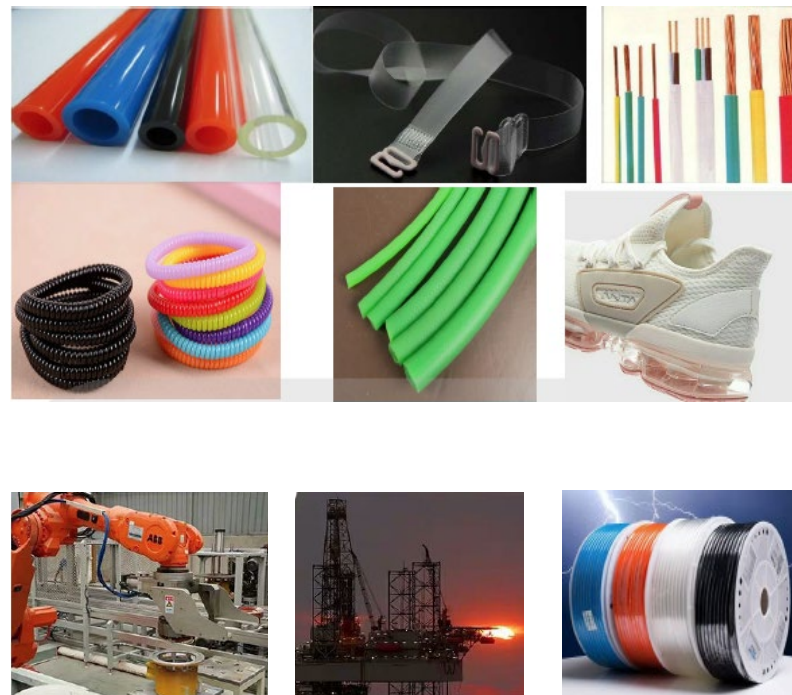
Hardness: Shore A 80 - Shore A 95

Operation: Extrusion, Blow molding

Characteristics: Excellent physical properties, Easy&stable processing, Cold resistance, Hydrolysis resistance, High transparency and reusable properties

Applications: Tube, Headdress, Elastic, Straps, Rope skipping, Air-Cushion etc.

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	300%模量 300% Modulus	撕裂强度 Tear Strength	加工温度 Processing Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D412	ASTM D624	/
单位 Unit	Shore A	MPa	%	MPa	MPa	KN/m	°C
E2180	83	38	600	5	9	90	160-190
E3185	87	35	570	6	12	100	170-200
E3385	85	35	550	6	11	100	160-190
E4180	81	40	600	5	9	100	160-190
E4185F	87	40	500	6	14	110	180-210
E4190	92	45	500	12	23	145	190-220
E4195	95	45	500	13	27	150	190-220
E495	98	40	480	15	28	170	160-190
E295	97	35	500	14	20	155	160-190
E198	98	35	450	17	27	170	160-190
E1198	98	40	490	18	30	190	180-195
E695	95	47	470	11	32	140	190-210
E695T	95	50	460	10	30	135	190-210



## Polyester-based TPU Film

Hardness: Shore A 80 - Shore A 95

Operation: Blow molding, Blowing film, Calender

Characteristics: Excellent physical properties, Gear transparence, Easy&stable process, Stable processing point

Applications: Film, Fabric lamination, Tube, Shoe accessories, Straps etc.

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	撕裂强度 Tear Strength	加工温度 Processing Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D624	/
单位 Unit	Shore A	MPa	%	MPa	KN/m	℃
INOV-1385Ac-6	86	23	800	5	90	180-200
INOV-1390Ac	86	28	780	6	100	190-210
INOV-3380A	81	32	830	6	95	190-210
INOV-3385A	85	35	820	7	110	190-210
INOV-3385AU	85	34	750	7	110	190-210
INOV-3390AE	90	38	700	10	130	200-220
INOV-3395AX	95	40	580	12	140	200-220



**Moisture Vapor Transmission series**

Hardness: Shore A 90 - Shore A 95

Operation: Blow molding, Blowing film

Characteristics: Excellent physical properties, Fast de-molding, Cold resistance, Great transparency

Applications: Film blowing products with higher requirements for transparency and moisture permeability, such as mountaineering suits, Surgical gown, Surfing suit etc.

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	300%模量 300% Modulus	撕裂强度 Tear Strength	透湿率 Permeability Moisture Vapor Transmission	加工温度 Processing Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D412	ASTM D624	ASTM E96	/
单位 Unit	Shore A	MPa	%	MPa	MPa	KN/m	g/m <sup>2</sup> /24h	℃
E590	93	40	500	9	20	129	<2000	170-190
E590-1	92	40	480	8	19	125	<2000	170-190
E595	95	40	500	12	24	141	<2000	170-190
E790	90	30	800	8	15	100	>6000	160-180
E780	83	23	900	4	8	80	>9000	160-180



## Polyester-based TPU-Hotmelt Film

Hardness: Shore A 70 - Shore A 97

Characteristics: Good adhesion to TPU, nylon, PVC, cloth, leather and other materials, and after bonding, it has the characteristics of high bonding strength, high toughness, wear resistance and good elasticity

Applications: Calendered film, Milled powder, Transparent film, fabric lamination, Shoe materials, Seam sealing tapes etc.

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	软化点 Softening point	熔体流动速率 Melt Flow Rate	贴合温度 Laminating Temperature	表干时间 Tack Free Time
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D36	ASTM D1238		
单位 Unit	Shore A	MPa	℃	g/10min	℃	min
T5160	97	18	75	33-36	70-80	3
T5260	97	20	80	16-18	75-85	3.5
T5260H	97	23	85	11-13	80-90	4
T6195	97	25	130	20-25	110-140	10
T6185	97	28	140	15-20	120-150	12

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	起始流动温度 Flow Beginning Temperature	软化点 Softening point	贴合温度 Laminating Temperature
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	INOVA Method	ASTM D36	
单位 Unit	Shore A	MPa	%	℃	℃	℃
B480	81	16	800	95	115	120-140
B485	85	18	950	103	125	130-150
T5170	72	18	850	105	126	130-150
T5175	77	19	800	113	133	140-160
T5180	81	22	860	119	143	140-160
T5185	85	24	850	122	146	140-160
T5190	91	19	750	115	133	140-160
T5195	95	20	700	120	135	140-160





**Polyether-based TPU**

Hardness: Shore A 75 - Shore A 95

Operation: Injection molding, Extrusion molding

Characteristics: Excellent physical properties, Cold resistance, Hydrolysis resistance, Mildew resistance, Easy&amp;stable process

Applications: Tube, Fire hoses, Sealing ring, Straps, Cables etc.

项目 Items	硬度 Hardness	拉伸强度 Tensile Strength	断裂伸长率 Elongation	100%模量 100% Modulus	300%模量 300% Modulus	撕裂强度 Tear Strength	玻璃化温度 Tg
检测标准 Standard	ASTM D2240	ASTM D412	ASTM D412	ASTM D412	ASTM D412	ASTM D624	DSC
单位 Unit	Shore A	MPa	%	MPa	MPa	KN/m	℃
M375	75	25	680	3	8	70	-50
M380	80	29	650	6	10	78	-45
M385	86	33	550	7	11	88	-45
M390	91	38	480	10	17	105	-42
M395	95	39	450	13	26	125	-40

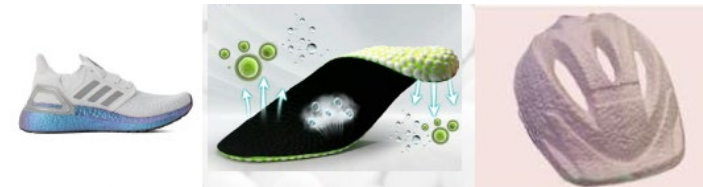


**E-TPU**

Hardness: Shore C 40 - Shore C 50

Characteristics: Excellent resilience, Cold resistance, Hydrolysis resistance, Mildew resistance, Adhesive properties, Easy processing

Applications: Plastic track, Sole, Helmet, Foamed Coil, Sheet etc.





项目 Items	密度 Density	硬度 Hardness	收缩 Shrinkage	回弹 Resilience	耐黄变等级 Yellowing resistance grade
检测标准 Standard	GB/T 533	GB/T 531.1	70°C 40min	GB/T 1681	HG/T 3689
单位 Unit	g/cm <sup>3</sup>	Shore C	%	%	-
F-85	0.18	45	0.3	60	3.5级
F-90	0.20	50	0.2	55	3.5级




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