

Thermoplastic Polyurethane Elastomer---TPU

TPU-31 Series



Characteristics:

Polyester-based, Perfect Transparency, Excellent Mechanical Properties and Good Processability.

Applications:

It can be widely used to produce shoe materials, seals, elastics, mobilephone cases and some other injection and extrusion products.

Physical properties

Item	Test method	unit	T3170	T3175	T3180	T3185	T3190	T3195
Specific gravity	ASTM-D792	g/cm ³	1.18	1.18	1.19	1.20	1.20	1.21
Hardness	ASTM-2240	Shore A	72±2	75±2	80±2	85±2	91±2	95±2
Tensile strength	ASTM-D412	MPa	21	23	27	30	38	41
Elongation at break	ASTM-D412	100%	870	890	750	640	550	540
100% modulus	ASTM-D412	MPa	2.9	3.6	4.3	5.1	8.4	11.5
300% modulus	ASTM-D412	MPa	4.4	4.9	6.7	8.4	16.5	18.6
Tear strength	ASTM-D624	N/mm	65	76	89	106	132.5	137
Processing temperature	Injection		165 ~ 190	170 ~ 200	180 ~ 200	185 ~ 205	190 ~ 215	200 ~ 215
	Extrusion			160 ~ 190	160 ~ 190	165 ~ 195	180 ~ 205	180 ~ 205

Note:

- 1) These are typical values and should not be used as specifications.
- 2) For optimum results, previous drying of the product during 3-4 hours at 85~100 is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.
The suggested processing-temperature profiles for injection & extrusion are depicted in the figure above