

STE(Styrenic Thermoplastic Elastomer) = TPE



What is STE?

- STE is the compounded material based on styrenic block copolymer(SBS or SEBS) and thermoplastic resin. STE is available for applications requiring rubber-like characteristics. Either by injection molding or extrusion.

Characteristics

- STE is available in a broad range of hardness. This material is ideal for applications requiring flexibility over a wide temperature range, excellent colorability, processing capability and durability.

Primary features and benefits include :

- Flexibility over a wide temperature range
- Low Shore-A hardness capability
- Superior processibility for extrusion and injection
- Abrasion resistance and durability
- Weatherability
- Odorless
- Easily colorable

End-Use Application

- STE can be applied in various fields such as automotive parts, shoes material, appliance parts and commodities by injection molding or extrusion

·Automotive parts

Mud guard, Fender liner, Mat, Gear knob, Assist grip, Steering wheel cover, Lip bumper

·Appliance

Insulator, Tray, Gasket

·Shoes material

Outsole, Heel counter, Health slipper

· Commodities

Toys, Hose & Tube, Sports goods

·Alternatives to flexible-PVC**Packages**

- 25kg/bag

- 500kg/ jumbo bag

Appearance

- Pellet

Physical and Mechanical Properties

STE	Unit	Test Method	STE 2545	STE 2070	STE 1165	STE 1068	STE 1092	STE 2035	STE 2050	STE 2170
Hardness	Shore-A,D	ASTM D2240	45A	68A	65A±2.0	68A±2.0	92A	49D	50D	70D
Density	g/cm ³	ASTM D0792	1	1.1	1.0±0.02	1.0±0.02	1	0.9	0.9	0.9
Tensile Strength	kg/cm ²	ASTM D412	35	30	55±1.0	58±1.0	100	150	100	200
Elongation	%	ASTM D412	300	400	600±50	500±50	300	400	300	300
Melt Flow Index	g/10min(190°C, 5kg)	ASTM D1238	16	20	55±5	50±5	10	20	20	20
Melt temperature	°C	-	160~190	160~190			160~190	160~190	160~190	160~190
Mold temperature	°C	-	30~60	30~60			30~60	30~60	30~60	30~60
Field	°C	-	Appliance		Shoes			Automotive		

STE-H	Unit	Test Method	STE-H2000	STE-H2025	STE-H2035	STE-H2045	STE-H2055	STE-H2065	STE-H2075
Hardness	Shore-A,D	ASTM D2240	0A	25A	35A	45A	55A	65A	75A
Density	g/cm ³	ASTM D0792	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Tensile Strength	kg/cm ²	ASTM D412	20	35	45	70	50	100	130
Elongation	%	ASTM D412	1000	550	650	790	750	700	650
Melt Flow Index	g/10min(190°C, 5kg)	ASTM D1238	10	10	15	20	25	25	30
Melt temperature	°C	-	160~190	160~190	160~190	170~200	170~200	170~200	170~200
Mold temperature	°C	-	30~60	30~60	30~60	30~60	30~60	30~60	30~60
Field	°C	-	Commodities		Shoes	Automotives			

* STE : SBS Compound, STEH : SEBS Compound

* The above data is typical value, therefore may be slightly different according to measuring condition