

Kraton D (SIS)

The Kraton D SIS family of polymers is high performance thermoplastic elastomers with a combination of high strength, low hardness and low viscosity for easy thermoplastic processing as a melt or in solution. SIS polymers are based on styrene and isoprene and are the lowest hardness and lowest viscosity of all the styrenic block copolymers. They are ideally suited for formulating pressure sensitive adhesives (packaging tape, labels, etc.), hot melt spray diaper adhesives, elastic films, and many other innovative applications.

Kraton D (SIS) Polymer Grades

These are typical values and should not be used to set specifications.

Property ^{1,2}	D1111 (SIS/SI) linear	D1113 (SIS/SI) linear	D1117 (SIS/SI) linear	D1119 (SIS/SI) linear	D1161 (SIS/SI) linear	D1163 (SIS/SI) linear	D1165 (SIS/SI) linear	D1193 (SIS/SI) Linear
Polystyrene Content(%)	22	16	17	22	15	15	30	24
Diblock Content(%)	15	56	33	66	19	38	17	30
Solution Viscosity (Pa.s)³	1.20	0.69	0.47	0.34	1.20	0.90	0.34	0.40
Melt Flow Rate (g/10 min)⁴	2	16	33	25	12	16	8	13
Tensile Strength (Mpa)⁵	28	4	8	-	28	17	21	-
300% Strength (Mpa)⁵	1.8	0.3	0.4	-	0.9	0.7	2.7	-
Elongation at Break(%)⁵	1200	1500	1300	-	1300	1400	1200	-
Hardness, Shore A, 30s	52	-	32	-	37	34	65	-
Physical Form	Porous Pellet	Dense Pellet	Dense Pellet	Dense Pellet	Porous Pellet, Milled Powder	Dense Pellet, Porous Pellet, Milled Powder	Porous Pellet	Porous Pellet

1. In the grade nomenclature 'D' indicates Kraton D (unhydrogenated Styrenic Block Copolymers) .

2. SIS: Styrene-Isoprene-Styrene block copolymer, SI: Styrene-Isoprene diblock, (SI)_n: Styrene-Isoprene multi-arm copolymer.

3. At 25% mass in toluene at 25°C.

4. Under 5 kg load at 200°C.

5. Typical properties determined on film cast from toluene solution according to ASTM D-412.