



Foster ProFlex™ SEBS

ProFlex™ is a comprehensive range of medical grade Styrene Ethylene Butylene Styrene (SEBS) Thermoplastic Elastomers (TPEs). These unique polymers offer excellent elastomeric properties, with superior design flexibility and ease of processing via injection molding and extrusion. ProFlex™ SEBS is available in a range of durometers, with standard formulations, tear resistant and ProPell™ formulations also available. Tailored hardness and melt flow properties are also available for custom orders.

ProFlex™ SEBS has passed USP Class VI testing for biocompatibility and is suitable for a variety of medical applications including catheters, surgical handles and ergonomic grips, amongst other uses. ProFlex™ SEBS is available in small development quantities beginning at 25 lbs.

General Properties: Standard, Tear Resistant and Low Friction Grades

Property	Test Method	Units	Standard ProFlex™ SEBS					
			35A 050-118B	45A 050-121A	55A 050-121D	65A 050-121E	75A 050-120A	85A 050-120B
Hardness	ASTM D2240	Shore A	35	44	54	64	75	85
Stress Break	ASTM D412	PSI	473	556	777	830	1,115	2,181
Strain Break	ASTM D412	%	516	407	381	327	625	517
Tensile Strength 50%E	ASTM D412	PSI	77	140	203	296	409	1,007
Tensile Strength 100%E	ASTM D412	PSI	117	200	297	409	471	1,112
Tensile Strength 200%E	ASTM D412	PSI	205	322	496	633	565	1,297
Tensile Modulus	ASTM D638	PSI	153	346	546	922	1,530	3,886
Tear Resistance	ASTM D624	PLI	63.27	80.45	109.75	139.3	198.8	290.8
Specific Gravity	ASTM D792.	-	0.90	0.91	0.90	0.90	0.90	0.90
CoF (Stainless Steel)	ASTM D1894.	-	2.33	2.57	1.96	1.89	1.21	1.28

Property	Test Method	Units	Tear Resistant ProFlex™ SEBS					
			35A 050-119A	45A 050-119C	55A 050-121B	65A 050-118J	75A 050-120C	85A 050-120D
Hardness	ASTM D2240	Shore A	35	47	56	65	75	85
Stress Break	ASTM D412	PSI	755	1,126	981	1,319	1,577	2,447
Strain Break	ASTM D412	%	640	685	496	565	715	524
Tensile Strength 50%E	ASTM D412	PSI	104	176	220	237	462	1,116

Property	Test Method	Units	Tear Resistant ProFlex™ SEBS Continued					
			35A 050-119	45A 050-119C	55A 050-121B	65A 050-118J	75A 050-120C	85A 050-120D
Tensile Strength 100%E	ASTM D412	PSI	157	240	300	325	537	1,220
Tensile Strength 200%E	ASTM D412	PSI	260	377	474	535	659	1,436
Tensile Modulus	ASTM D638	PSI	208	397	623	623	1,611	3,888
Tear Resistance	ASTM D624	PLI	77.43	112.32	138.87	150.46	195.8	330.96
Specific Gravity	ASTM D792.	-	0.91	0.91	0.91	0.91	0.91	0.91
CoF (Stainless Steel)	ASTM D1894.	-	3.42	2.88	1.90	1.61	0.84	1.18

Property	Test Method	Units	ProPell™ Low Friction ProFlex™ SEBS					
			35A 050-123E	45A 050-123F	55A 050-123D	65A 050-123A	75A 050-123C	85A 050-123B
Hardness	ASTM D2240	Shore A	35	47	55	65	77	87
Stress Break	ASTM D412	PSI	532	789	846	1,017	1,336	1,927
Strain Break	ASTM D412	%	563	552	432	426	715	582
Tensile Strength 50%E	ASTM D412	PSI	88	160	218	354	490	760
Tensile Strength 100%E	ASTM D412	PSI	132	218	298	464	554	869
Tensile Strength 200%E	ASTM D412	PSI	219	343	473	661	649	1,047
Tensile Modulus	ASTM D638	PSI	186	377	573	1,044	1,678	2,428
Tear Resistance	ASTM D624	PLI	67.6	110.6	112.14	141.26	208.47	311.25
Specific Gravity	ASTM D792.	-	0.90	0.91	0.90	0.90	0.90	0.90
CoF (Stainless Steel)	ASTM D1894.	-	2.29	1.86	1.60	1.34	0.72	1.05

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