

### End Uses

SPX extensible high performance unbleached kraft paper has superior Tensile Energy Absorption (TEA) and balanced strength characteristics in both the machine and cross direction.

Even stronger than SPK, multiwall shipping sacks made from SPX use less paper in demanding applications for a variety of products such as cement and other construction materials. Typically used in pasted valve sacks.

### Fibre Source

SPX is manufactured with a blend of virgin fibre from Black Spruce and Jack Pine. These northern boreal slow growing woods have exceptionally high strength potential. Canadian Kraft Paper (CKP) fibre is harvested and replanted in accordance with sustainable forest management practices under CSA, PEFC, and ISO 14001 environmental quality control standards.

### Quality Systems

SPX quality is controlled with a comprehensive management system registered to ISO 9001 and incorporating elements of environmental (ISO 14001) and employee health and safety (OHAS 18001) management systems. CKP manufactures kraft papers in compliance with FDA as per 21 CFR 176.170 and 176.180, CONEG heavy metals and toxics, German recommendation XXXVI, 94/62/EEC certifications and is Kosher certified. This paper meets the requirements for packaging recoverable by composting and degradation ISO 17088 (2008) and EN 13432 2000. Certificates of compliance to all applicable regulatory requirements will be supplied upon request.

### Typical Values SI

Properties	Units						Test Method
Basis Weight	gsm		80	85	90	95	ISO 536
Tensile	kN/m	MD	7.1	7.6	8.0	8.5	ISO 1924-3
		CD	5.1	5.5	5.7	6.1	
Tensile Index	Nm/g	MD	89	89	89	89	ISO 1924-3
		CD	64	64	64	64	
Stretch	%	MD	6.8	6.8	6.8	6.8	ISO 1924-3
		CD	8.9	8.9	8.9	8.9	
TEA	J/m <sup>2</sup>	MD	255	275	290	305	ISO 1924-3
		CD	280	300	310	330	
TEA Index	J/g	MD	3.2	3.2	3.2	3.2	ISO 1924-3
		CD	3.5	3.5	3.5	3.5	
Tear	mN	MD	975	1050	1125	1190	ISO 1974
		CD	1050	1150	1225	1285	
Porosity	Sec/100cc		15	15	15	15	ISO 5636-5
Cobb	g/m <sup>2</sup> /min		30	30	30	30	ISO 535
Moisture	%		7.5	7.5	7.5	7.5	ISO 287

Product specifications in effect as of January 1, 2019

MD – Machine Direction CD – Cross Direction

Paper Test Conditions: Temperature = 23+/- 1°C, Relative Humidity = 50+/- 2%



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### Typical Values Imperial

Properties	Units					Test Method	
Basis Weight	lbs/3000ft <sup>2</sup>		50	52	55	58	ISO 536
Tensile	lbs/in	MD	40.5	43.4	45.7	48.5	ISO 1924-3
		CD	29.1	31.4	32.5	34.8	
Tensile Index	Nm/g	MD	89	89	89	89	ISO 1924-3
		CD	64	64	64	64	
Stretch	%	MD	6.8	6.8	6.8	6.8	ISO 1924-3
		CD	8.9	8.9	8.9	8.9	
TEA	ft lb/ft <sup>2</sup>	MD	17.5	18.8	19.9	20.9	ISO 1924-3
		CD	19.2	20.5	21.2	22.3	
TEA Index	J/g	MD	3.2	3.2	3.2	3.2	ISO 1924-3
		CD	3.5	3.5	3.5	3.5	
Tear	g	MD	100	105	115	120	ISO 1974
		CD	105	115	125	130	
Porosity	sec/100cc		15	15	15	15	ISO 5636-5
Cobb	g/m <sup>2</sup> /min		30	30	30	30	ISO 535
Moisture	%		7.5	7.5	7.5	7.5	ISO 287

Product specifications in effect as of January 1, 2019

MD – Machine Direction CD – Cross Direction

Paper Test Conditions: Temperature = 73.4±1.8°F, Relative Humidity = 50%±2%

