Solar-Shield® Belts

Solar-Shield® heat belts are offered with polyester/nylon, polyester/polyester and fiberglass fabric reinforcements. It offers high performance in extremely hot material applications. The fiberglass fabric option offers the highest degree of burn-through resistance of any current available fabric reinforcement.

Markets	Applications	Cover Compounds
› Cement	› Cement Clinker	› Solar-Shield® XL 750
› Foundry	› Coke Plants	› Solar-Shield 400
› Iron Ore	› Hot Powdery Materials	› 6740A (Solar-Shield® 300)
› Steel production	› Sintered Ore	› HT-Nitrile (Solar-Shield® OR)
› Taconite	› Steel Mills	› Defender Plus
	› Taconite Pellets	

See pages 78-82 for more specific details.

Get a lower cost-per-ton conveyed | **Tension Range: 220 – 1200 PIW**

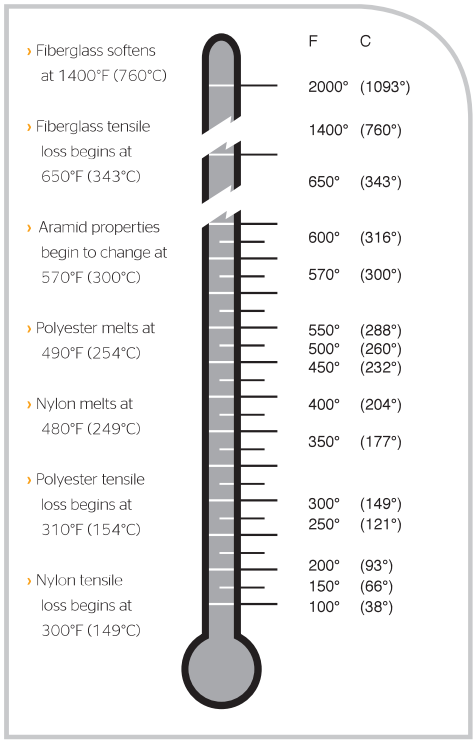
Features & Benefits

Heat-resistant cover resists cracking and hardening

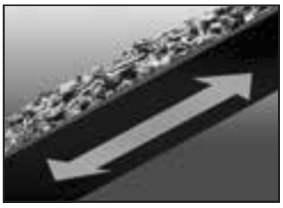
Solar-Shield® XL 750 belting performs over the long run while retaining its flexibility despite punishing conditions and loads. Less cracking and hardening translates into longer life and reduced replacement costs.

Solar-Shield® XL 750 compound improves heat resistance above and beyond our 400°F (204°C) compound and significantly extends belt life. Solar-Shield® XL 750 was designed to handle hot material loads intermittently up to 750°F (399°C), providing extreme longevity in severe heat applications.

General Heat Resistance of Heat Belt Reinforcement



Features & Benefits



High-temperature resistance to tearing and abrasion

Load after load, Solar-Shield® XL 750 stands up to prolonged exposure. This reduced maintenance and downtime helps lower overall operating costs.

Synthetic carcass construction

Solar-Shield® synthetic carcass provides great dimensional stability and strength at high temperatures and operating tensions up to 1200 PIW.

Solar-Shield® carcass with fiberglass reinforcement

Fiberglass reinforcement throughout all plies of the carcass provides maximum protection when temperatures are not constant. The carcass stands up to "hot shots," resisting burn-through up to 1000°F (538°C).

Solar-Shield® Conveyor Belt Data

	Solar-Shield 220/2	Solar-Shield 220/2 GL	Solar-Shield 250/2	Solar-Shield 330/3	Solar-Shield 330/3 GL	Solar-Shield 375/3	Solar-Shield 400/2	Solar-Shield 500/4	Solar-Shield 600/3	Solar-Shield 800/4	Solar-Shield 1000/5	Solar-Shield 1200/6
Number of Plies	2	2	2	3	3	3	2	4	3	4	5	6
Fabric Type*	P/P	Glass	P/N	P/P	Glass	P/N	P/P	P/N	P/P	P/P	P/P	P/P
Average Permanent Elongation (%)**	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Imperial												
Vulcanized & Fastener Rating (PIW)	220	220	250	330	330	375	400	500	600	800	1000	1200
Carcass Gauge (in.)	0.108	0.148	0.108	0.181	0.233	0.182	0.178	0.253	0.251	0.340	0.429	0.518
Carcass Weight (lb./sq. ft.)	0.63	1.02	0.63	1.04	1.58	1.07	0.93	1.50	1.37	1.88	2.34	2.83
Approximate 1/32 in. Cover Weight (lb./sq. ft.)	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Elastic Modulus (PIW)	23,000	37,000	30,000	34,500	55,500	45,000	44,000	60,000	66,000	88,000	110,000	132,000
Step Length (in.)	12	18	12	12	18	12	16	12	16	16	16	16
Metric												
Vulcanized & Fastener Rating (kN/m)	39	39	44	58	58	66	70	88	105	140	175	210
Carcass Gauge (mm)	2.7	3.8	2.7	4.6	5.9	4.6	4.5	6.4	6.4	8.6	10.9	13.2
Carcass Weight (kg/sq. m)	3.1	5.0	3.1	5.1	7.7	5.2	4.5	7.3	6.7	9.2	11.4	13.8
Approximate 1mm Cover Weight (kg/sq. m)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Elastic Modulus (kN/m)	4030	6480	5250	6040	9720	7880	7710	10,510	11,560	15,410	19,260	23,120
Step Length (mm)	300	460	300	300	460	300	410	300	410	410	410	410

Solar-Shield® rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. *P/P = Poly/Poly; P/N = Poly/Nylon; GL = Glass. **Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations.

Solar-Shield® Belts

Solar-Shield® Load Support – Maximum Belt Width

Material Weight		0-40 lb./cu. ft. (0-640 kg/cu. m)			41-80 lb./cu. ft. (641-1280 kg/cu. m)			81-120 lb./cu. ft. (1281-1920 kg/cu. m)			Over 120 lb./cu. ft. (Over 1920 kg/cu. m)		
PIW/Plies – Fabric*	**Trough Idlers**	**20 deg**	**35 deg**	**45 deg**	**20 deg**	**35 deg**	**45 deg**	**20 deg**	**35 deg**	**45 deg**	**20 deg**	**35 deg**	**45 deg**
Inches													
220/2 - P/P		54	48	48	48	42	36	42	42	30	36	30	NR
220/2 - GL		54	48	42	48	42	36	42	42	NR	36	30	NR
250/2 - P/N		54	48	48	48	42	36	42	42	30	36	30	NR
330/3 - P/P		72	60	60	60	54	48	54	48	42	48	42	NR
330/3 - GL		72	60	60	60	54	48	54	48	42	48	42	NR
375/3 - P/N		72	60	60	60	54	48	54	48	42	48	42	NR
400/2 - P/P		60	54	54	54	48	42	48	48	42	42	36	30
500/4 - P/N		84	72	72	72	60	54	72	60	54	60	54	48
600/3 - P/P		84	72	72	72	60	54	72	60	54	60	54	48
800/4 - P/P		96	84	84	84	72	72	84	72	60	72	60	54
1000/5 - P/P		108	96	96	96	84	84	96	84	72	84	72	72
1200/6 - P/P		116	108	108	108	96	96	108	96	84	96	84	84
Millimeters													
220/2 - P/P		1370	1220	1220	1220	1070	910	1070	1070	760	910	760	NR
220/2 - GL		1370	1220	1070	1220	1070	910	1070	1070	NR	910	760	NR
250/2 - P/N		1370	1220	1220	1220	1070	910	1070	1070	760	910	760	NR
330/3 - P/P		1830	1520	1520	1520	1370	1220	1370	1220	1070	1220	1070	NR
330/3 - GL		1830	1520	1520	1520	1370	1220	1370	1220	1070	1220	1070	NR
375/3 - P/N		1830	1520	1520	1520	1370	1220	1370	1220	1070	1220	1070	NR
400/2 - P/P		1520	1370	1370	1370	1220	1070	1220	1220	1070	1070	910	760
500/4 - P/N		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1200
600/3 - P/P		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1200
800/4 - P/P		2440	2130	2130	2130	1830	1830	2130	1830	1520	1830	1520	1400
1000/5 - P/P		2740	2440	2440	2440	2130	2130	2440	2130	1830	2130	1830	1850
1200/6 - P/P		2950	2740	2740	2740	2440	2440	2740	2440	2130	2440	2130	2150

On systems with troughing idler spacing greater than 5 ft. (1.5m) OR idler roll gap greater than 1/2 in. (12.7mm), consult your Sales Representative or Continental. *P/P = Poly/Poly; P/N = Poly/Nylon; GL = Glass

Solar-Shield® Troughability – Minimum Belt Width

Table based on ISO 703 Testing Procedure

Idlers	Solar-Shield 220/2	Solar-Shield 220/2 GL	Solar-Shield 250/2	Solar-Shield 330/3	Solar-Shield 330/3 GL	Solar-Shield 375/3	Solar-Shield 400/2	Solar-Shield 500/4	Solar-Shield 600/3	Solar-Shield 800/4	Solar-Shield 1000/5	Solar-Shield 1200/6
Inches												
20 Degree Idlers	24	18	24	24	24	24	24	30	30	36	42	48
35 Degree Idlers	24	24	24	30	30	30	30	36	36	42	48	54
45 Degree Idlers	30	30	30	36	36	36	36	42	42	48	54	60
Millimeters												
20 Degree Idlers	610	460	610	610	610	610	610	760	760	910	1070	1220
35 Degree Idlers	610	610	610	760	760	760	760	910	910	1070	1220	1370
45 Degree Idlers	760	760	760	910	910	910	910	1070	1070	1220	1370	1520

If top cover and pulley cover are balanced (i.e., 3/16 in. x 3/16 in. or 5mm x 5mm) or less than 1/16 in. (2mm) differential (i.e., 3/16 in. x 5/32 in. or 4mm x 3mm), add 6 in. (150mm) to the minimum belt width. 6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to installation in ambient temperatures of less than 50°F (10°C). The above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

Solar-Shield® Minimum Pulley Diameters

	Solar-Shield 220/2	Solar-Shield 220/2 GL	Solar-Shield 250/2	Solar-Shield 330/3	Solar-Shield 330/3 GL	Solar-Shield 375/3	Solar-Shield 400/2	Solar-Shield 500/4	Solar-Shield 600/3	Solar-Shield 800/4	Solar-Shield 1000/5	Solar-Shield 1200/6
Inches												
Over 80% Tension	16	30	16	18	42	18	16	24	24	30	36	42
60% to 80% Tension	14	24	14	16	36	16	14	20	20	24	30	36
40% to 60% Tension	12	20	12	14	30	14	12	18	18	20	24	30
Up to 40% Tension	12	18	12	14	24	14	10	18	16	18	20	24
Tails and Snubs	12	18	12	14	24	14	10	18	16	18	20	24
Millimeters												
Over 80% Tension	410	760	410	460	1070	460	410	610	610	760	910	1070
60% to 80% Tension	360	610	360	410	910	410	360	510	510	610	760	910
40% to 60% Tension	300	510	300	360	760	360	300	460	460	510	610	760
Up to 40% Tension	300	460	300	360	610	360	250	460	410	460	510	610
Tails and Snubs	300	460	300	360	610	360	250	460	410	460	510	610