



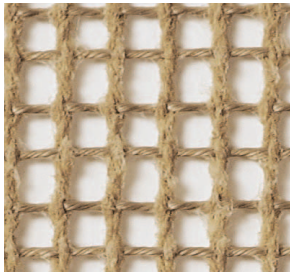
# CHEMFAB<sup>®</sup>

*A Saint-Gobain Brand*

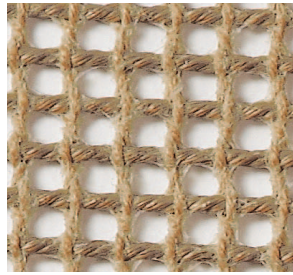
Saint-Gobain

Performance Plastics

Belting Products



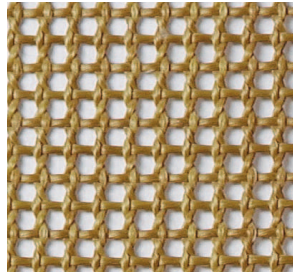
TCN<sup>™</sup> 1590



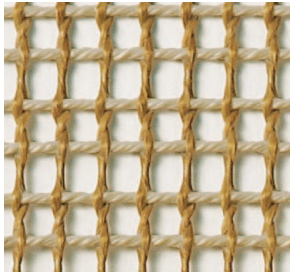
TCN<sup>™</sup> 2000



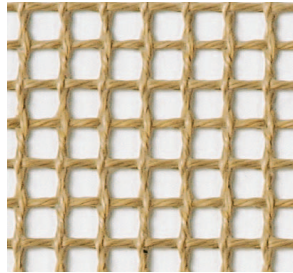
TCK<sup>®</sup> 17



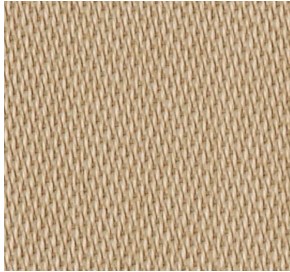
TCK<sup>®</sup> 800



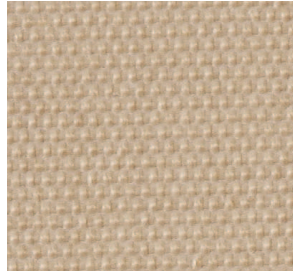
TCK<sup>®</sup> 1000



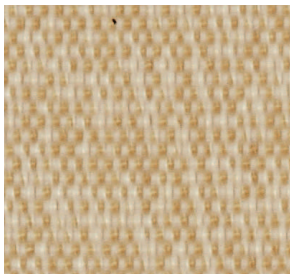
TCK<sup>®</sup> 1590



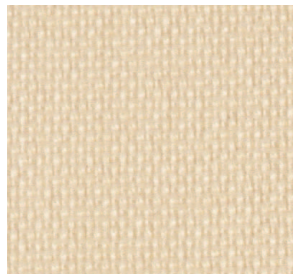
CHEMFAB<sup>®</sup> 183



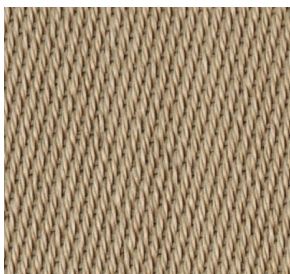
CHEMFAB<sup>®</sup> 313X



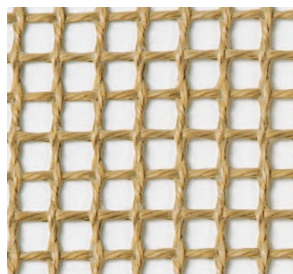
CHEMFAB<sup>®</sup> 313X-K



CHEMFAB<sup>®</sup> 1565V



CHEMFAB<sup>®</sup> 1584G



CHEMFAB<sup>®</sup> 1590

## SUPPORT, DRIVING, TENSIONS AND GUIDING

The excellent dimensional stability of Chemfab brand conveyor belts makes it possible to use simple systems for support, tensioning, driving and guiding.

Nevertheless, if belts are to be trouble-free throughout their full working life, it is essential that the arrangements for tensioning, driving and guiding be specifically designed for the particular application. Accordingly, we advise that customers seek the advice of their area Sales Manager.

### SUPPORT

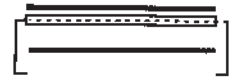
Steel sliding plate, steel chevrons or rollers are all suitable forms of support for Saint-Gobain Performance Plastics belts.



SLIDING STEEL PLATE



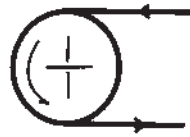
CHEVRONS  
Top View



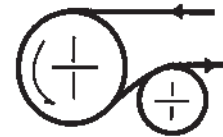
ROLLER SUPPORT

### DRIVING

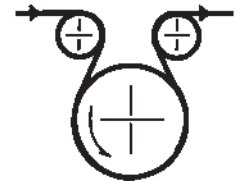
A single drive roller with a flat face and suitable high friction covering will meet the requirements of most applications.



PLAIN DRIVE



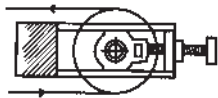
DRIVE WITH  
SNUBBING ROLLERS



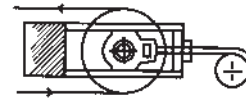
DRIVE WITH  
SNUBBING ROLLERS

### TENSIONING

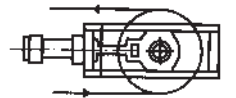
Tensioning can be achieved by quite simple means as Saint-Gobain Performance Plastics belts undergo very little expansion or contraction during their working life.



SCREW TENSIONER



DEAD WEIGHT  
TENSIONER



PNEUMATIC/HYDRAULIC  
TENSIONER

### GUIDING

A guiding system is essential for most PTFE belts. Guiding may be by external guide systems or by incorporating a system in the belt construction, such as metal pins or grommets.

External, electrical, or mechanical systems are preferred, since they are suitable for all widths of belts and prolong belt life by preventing edge damage due to incorrect tracking.

### OPTIMIZING BELT LIFE

Belt life varies by each application, but a few rules will help you maximize life: run at low tensions, use only flat rollers, ensure each roller is aligned properly, and utilize an automatic guiding system.

Saint-Gobain Performance Plastics developed its belting materials for applications that require superior release characteristics, permeability for rapid drying, dimensional and thermal stability, and the dynamic strength to stand up to the most rigorous operating conditions. The unique behavior of the materials results in a product that is more practical and cost-effective than conventional belting materials.

### Release Properties

The release characteristics of PTFE are superior to those of any other high-temperature material. This non-stick property is retained over a full range of operating temperatures.

### Permeability

Our belting combines a maximum amount of open area with good mechanical strength. The result is a very high level of controlled air flow through the belt, maximizing the rate of drying.

### Dimensional Stability

The woven reinforcement results in an elongation of approximately 1% under normal mechanical loading, even at temperatures of 550°F. Length distortion is exceptionally low, while width rigidity and stability are enhanced by the high-modulus of the reinforcement.

### Thermal Stability

Chemfab® brand belting may be used continuously at temperatures up to 550°F without reducing its performance.

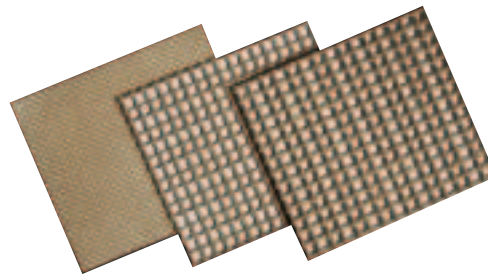
### Dynamic Strength

Our belting has been subjected to static and dynamic tests which indicate that it can withstand all normal operating conditions affecting service life.

### Chemical Resistance

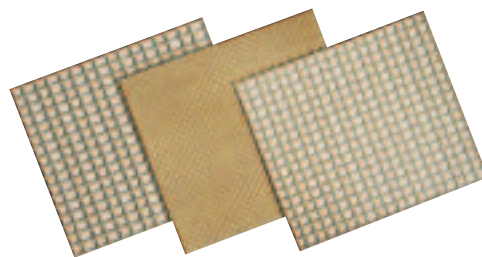
PTFE surfaces are unaffected by most chemicals and solvents.

## TCN™



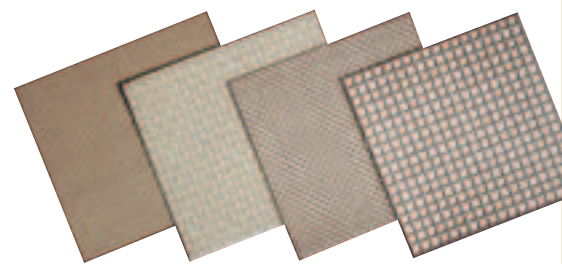
Product Style Numbers	Fiber Length (warp)	Content Width (fill)	Coating	Weight (oz/sq yd)	Thickness (in)	Open Area (%)	Edge Reinforcement
1590	NOMEX®	GLASS	PTFE	16.2	.070	80	3 mil SKIVED PTFE
2000	NOMEX	GLASS	PTFE	37.0	.085	65	3 mil SKIVED PTFE

## TCK®



Product Style Numbers	Fiber Length (warp)	Content Width (fill)	Coating	Weight (oz/sq yd)	Thickness (in)	Open Area (%)	Edge Reinforcement
17	KEVLAR®	KEVLAR	PTFE	20.0	.017	0	Not Required
800	KEVLAR	KEVLAR	PTFE	12.0	.034	50	3 mil SKIVED PTFE
1000	KEVLAR	GLASS	PTFE	18.9	.050	80	3 mil SKIVED PTFE
1589	KEVLAR	KEVLAR	PTFE	6.2	.018	50	3 mil SKIVED PTFE
1590	KEVLAR	KEVLAR	PTFE	6.3	.025	85	3 mil SKIVED PTFE

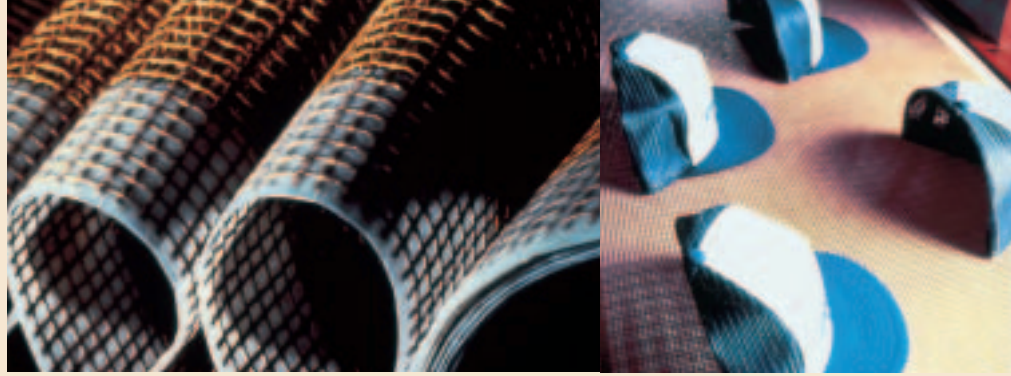
## CHEMFAB®



Product Style Numbers	Fiber Length (warp)	Content Width (fill)	Coating	Weight (oz/sq yd)	Thickness (in)	Open Area (%)	Edge Reinforcement
313X	GLASS	GLASS	PTFE	30.8	.024	0	Not Required
313XK	KEVLAR/GLASS	GLASS	PTFE	35.0	.030	0	Not Required
1565V	GLASS	GLASS	PTFE	29.0	.023	0	Not Required
183	GLASS	GLASS	PTFE	20.0	.024	0	Not Required
1584G	GLASS	GLASS	PTFE	32.0	.037	0	Not Required
1590	GLASS	GLASS	PTFE	13.0	.033	75	3 mil SKIVED PTFE

Near Right: Saint-Gobain Performance Plastics provides an extensive line of standard and custom products and capabilities to meet the most demanding customer specifications.

Right: The fast-growing screen printing and graphic arts industry uses our dryer belts extensively.



Width Availability (in)	Tensile Strength (lbs/in width) (warp)	Elongation (% - tension up to 10 PLI)	Min. Pulley Dia. (ins - 180 wrap)		Maximum Temperature (°F)		Maximum Allowable Working Tension (lbs/in width)	Typical Applications
			DRIVE	IDLERS	CONTINUOUS	INTERMITTENT		
up to 175	140	less than 1	6	3	500	550	15	<ul style="list-style-type: none"> <li>• TCN—PTFE-coated Nomex</li> <li>• High-temperature polyamide fiber offers a belting material with excellent flex life and superior abrasion resistance</li> <li>• TCN belts are easily tracked and have less than 1% elongation</li> </ul>
up to 126	160	less than 2	6	3	500	550	15	



Far Left: Our customers benefit from our internal fabrication capabilities, which provide responsive production and stringent quality assurance.

Left: Our extensive analytical capabilities and experienced technicians ensure that our customers receive the right product for their particular requirements.

Width Availability (in)	Tensile Strength (lbs/in width) (warp)	Elongation (% - tension up to 10 PLI)	Min. Pulley Dia. (ins - 180 wrap)		Maximum Temperature (°F)		Maximum Allowable Working Tension (lbs/in width)	Typical Applications
			DRIVE	IDLERS	CONTINUOUS	INTERMITTENT		
58	450	less than 1	6	3	400	450	25	<ul style="list-style-type: none"> <li>• TCK—PTFE-coated KEVLAR</li> <li>• High-temperature aramid fiber offers a belting material with an extremely high strength-to-weight ratio</li> <li>• KEVLAR is an excellent fabric for use in high-moisture environments</li> </ul>
up to 75	360	less than 1	6	3	400	450	25	
up to 162	350	less than 1	6	3	400	450	25	
up to 78	425	less than 1/2	6	3	400	450	25	
up to 175	370	less than 1	6	3	400	450	25	

Near Right: Our development laboratories include pilot-scale operations for prototype manufacture of our flexible composites.

Middle: We have the widest-width weaving capability in the industry. Fluoropolymer-coated flexible composites are available up to 172 inches wide.

Far Right: Flexible components may be evaluated by subjecting the materials to the severe crushing and twisting action of test equipment as described in ASTM-F392.



Width Availability (in)	Tensile Strength (lbs/in width) (warp)	Elongation (% - tension up to 10 PLI)	Min. Pulley Dia. (ins - 180 wrap)		Maximum Temperature (°F)		Maximum Allowable Working Tension (lbs/in width)	Typical Applications
			DRIVE	IDLERS	CONTINUOUS	INTERMITTENT		
up to 170	460	less than 1/2	8	4	500	600	25	<ul style="list-style-type: none"> <li>• CHEMFAB—PTFE-coated fiberglass offers a belting material of proven performance in industry</li> <li>• Fiberglass is a durable, high-temperature material that provides maximum value in use</li> </ul>
up to 155	900	less than 1/2	8	4	500	600	25	
up to 170	500	less than 1/2	8	4	500	600	25	
up to 62	600	less than 1/2	8	4	500	600	25	
up to 66	1100	less than 1/2	8	4	500	600	25	
up to 175	235	less than 1	10	3	500	600	15	

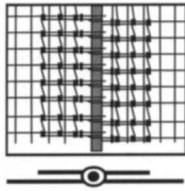
# Fabrication Techniques

## SEAM DESCRIPTIONS

Saint-Gobain Performance Plastics provides a broad range of seam options suited to the performance specifications of each belting system.

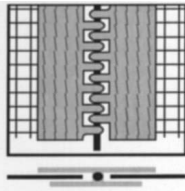
### FOLD BACK LOOP SEAM

The carcass of our open weave belting material is folded back onto itself at each end and stitched into place. From the apex of each fold, one or more fill (cross-wise) threads are removed to create a series of loops. The looped ends are then meshed together and a joining pin is led through to complete the seam. This method is a direct and reliable means of creating a seam from the same material as the belt itself.



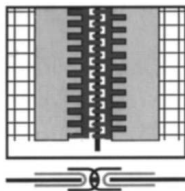
### CABLE SEAM

High-temperature webbed synthetic fabric assures high-strength performance of the cable seam. Alternately woven one side open and one side closed every 1/8", sections of synthetic material are folded over the belt ends and stitched in place, creating a series of loops parallel to the width of the belt. These belt ends are then meshed and joined by a wire fed through to complete the seam. This seam is produced with high-strength, high-temperature synthetic fibers.



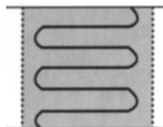
### ALLIGATOR OR CLIPPER LACED SEAM

In this extremely strong and flexible mechanical seam, Alligator or Clipper type metal lacing is locked into reinforced belt ends. The laced ends are then meshed and joined by a pin. Available in stainless steel, steel or Monel.



### FINGER SPLICE

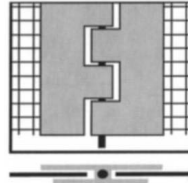
This unique splice uses "fingers" from the belt carcass that are locked together through heat



sealing. A finger splice used on a solid belt produces a very smooth, continuous release surface.

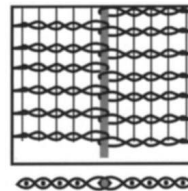
### HINGE SEAM

Separate sections of material are folded over each of the belt ends, then heat sealed and/or stitched in place. A series of castellated or crenel notches cut into the apex of each fold form a pattern of square or "toothed" loops at the belt ends. The ends are then meshed and joined by a pin fed through the matched pattern of loops. This seam is produced with TCK (KEVLAR, a superior strength fabric, coated with PTFE).



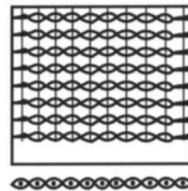
### PIN SEAM

This seam incorporates reweaving to provide the convenience of a mechanical joining technique combined with the benefits of an endless belt. Fill (cross-wise) threads are removed at each belt end to free warp (lengthwise) threads. The warp threads are then folded back and rewoven into the belt carcass to form loops. The two ends are then meshed together and joined by a pin passed through the loops. Joining pins are available in stainless steel or non-metallic materials.



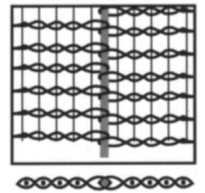
### ENDLESS WOVEN SEAM

Fill (crosswise) threads are removed at each belt end to free warp (lengthwise) threads. The belt ends are then joined by reweaving the warp threads into the belt carcass of the opposite belt end. This technique produces a truly endless belt with excellent tracking characteristics, uniformity and greater overall flexibility than belts with conventional seams.



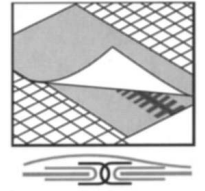
### TCK 90 SEAM

Using our weaving technology, the TCK 90 seam incorporates braided KEVLAR yarns woven into an open weave. This extremely strong seam is then stitched to the belt carcass, resulting in an open weave seam that does not block airflow. This seam is ideal for drying applications.



### FLAP OVER SEAM

A PTFE-coated, synthetic fabric flap over the seam area can be heat sealed and/or stitched to a belt. This will ensure a continuous release surface which will inhibit mark-off from seam contamination and protect the seams from abrasion. A flap over seam is generally used with a metal seam and is available with all Saint-Gobain Performance Plastics belting styles.

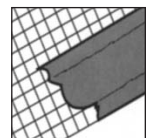
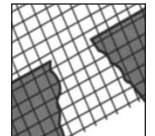


### EDGE REINFORCEMENT

Belt edge reinforcement provides additional support for pin guides, grommets and eyelets, protects belt edges from wear and unraveling and presents a uniform edge for automatic tracking sensors. We offer the following edge reinforcements with all belting styles and recommend them for use with porous or screen dryers materials such as TCK 1590, TCN 1590, TCK 1589, CHEMFAB 1590 and CHEMFAB 1589.

**3 Mil PTFE Film:** Heat sealed to the belt edge, this reinforcement is available in widths from 1" to 1-1/2".

**5 Mil/10 Mil Fabric:** Reinforcing strips of 5 or 10 mil woven glass fabric coated with PTFE are heat sealed and/or stitched to the belt edge. Available in widths from 1/2" to 2".



		PRODUCTS												
		TCN 1590	TCN 2000	TCK 17	TCK 800	TCK 1000	TCK 1589	TCK 1590	CHEMFAB 375X	CHEMFAB 375XX	CHEMFAB 1565V	CHEMFAB 183	CHEMFAB 1584C	CHEMFAB 1590
Conveying	Packaging, screen printing	•	•	•	•	•	•	•	•	•	•	•	•	•
Casting	Polymer processing; manufacturing floor coverings, carpet tiles and rubber extrusions			•					•	•	•	•	•	
Releasing	Food processing; screen printing; rubber extrusions processing; composites manufacturing			•					•	•	•	•	•	
Laminating	Textile fuse pressing; wood processing; composites manufacturing			•					•	•	•			
Drying	Screen printing; packaging; food processing	•	•		•	•	•	•						•

## Chemfab® Brand Belting Products

If you need belting products that must operate cleanly and economically in extreme environments, then you need Saint-Gobain Performance Plastics belting. Exceptional release properties and dimensional stability at temperature extremes, as well as chemical resistance and controlled permeability, are the hallmarks of our belting products. Whether you need a standard "off the shelf" product, one that is engineered to a specific application or an entirely new product, we can meet your unique challenge.

Saint-Gobain Performance Plastics is a world leader in the production of differentiated products based in polymer and fluoropolymer technology with our family of acquisitions that includes Furon, Norton, Chemfab and Norwood. Saint-Gobain offers a wide range of non-adhesive products including PTFE and silicone-coated fabrics, belting, fluoropolymer films, release liners and foams.

These engineered products are used primarily by OEM servicing industries such as fuel processing, transportation, electronics, health-care, construction, packaging and industrial equipment. Our combined expertise in fabrics, films, foams and coatings gives you confidence in our team approach to providing solutions to critical applications.

Contact your nearest Saint-Gobain Performance Plastics representative for more details.



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[www.chemfab.com](http://www.chemfab.com)  
[www.plastics.saint-gobain.com](http://www.plastics.saint-gobain.com)

## Saint-Gobain Performance Plastics: A Tradition of Innovation



*The invention of making glass by casting it onto a table marked a change from older, traditional processes such as glass blowing. This new process revolutionized glass-making for years to come and would continue to be virtually the only method until the 1920s.*

*Detail from a painting depicting glass being cast in Saint-Gobain in 1824. Painting by Edouard Pingret. (Saint-Gobain collection)*

For more than four decades, Saint-Gobain Performance Plastics and its family of companies have supplied the world with innovative, high performance polymer products for the most demanding industrial applications.

Our tradition of excellence goes back more than 300 years through our connection to Compagnie de Saint-Gobain, one of the world's top 100 industrial

corporations and a leader in the production of engineered materials. Since its founding in 1665 as a glassmaker in France, Saint-Gobain has continued to find new and innovative ways to transform materials ranging from plastics to glass.

Today, Saint-Gobain is a global leader in each of its businesses, including flat glass, glass containers, insulation, rein-

forcements, building materials, abrasives, industrial ceramics and piping.

Saint-Gobain Performance Plastics carries on Saint-Gobain's commitment to quality as the world's leading producer of engineered high performance polymer products for virtually every industry around the globe, using resins such as fluoropolymers, silicones and high-temperature thermoplastics.

Backed by a proud heritage of product innovation, technological expertise and market leadership, Saint-Gobain Performance Plastics is dedicated to working with our customers to solve today's application issues and the challenges that lie ahead.

DISTRIBUTED BY:

**Limited Warranty:** For a period of 6 months from the date of first sale, Saint-Gobain Performance Plastics Corporation warrants this product(s) to be free from defects in manufacturing. Our only obligation will be to provide replacement product for any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risks, if any, including the risk of injury, loss or damage, whether direct or consequential, arising out of the use, misuse, or inability to use this product(s). SAINT-GOBAIN PERFORMANCE PLASTICS DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**NOTE:** Saint-Gobain Performance Plastics Corporation does not assume any responsibility or liability for any advice furnished by it, or for the performance or results of any installation or use of the product(s) or of any final product into which the product(s) may be incorporated by the purchaser and/or user. The purchaser and/or user should perform its own tests to determine the suitability and fitness of the product(s) for the particular purpose desired in any given situation.