



**Products That Work
Service That Counts
Experience That Matters**

Advanced Flexible Composites

DuraSil® Silicone Fabrics (300 [red], 301 [white], 302 [black] Series)



Description

The DuraSil® Silicone Series is the most conformable, flexible and wear resistant product line offered by AFC. This series is made from woven fiberglass substrates that have been coated on one or both sides with silicone rubber. These fabrics provide a higher friction surface with different release qualities than PTFE coated fabrics. In fact, some products that may adhere to PTFE coated fabrics may not adhere to a silicone coated surfaces. Available in multiple colors and with multiple plies, (up to three), These fabrics are used in applications where a surface grip with excellent release is desired.

What is Silicone?

Silicone is the second most abundant element on earth. When combined with other materials in a series of three reactions, the silicone becomes linked into a synthetic polymer chain containing a silicone-oxygen "backbone" to form *polydimethylsiloxane (PDMS)*. PDMS is then crosslinked with additional polymer chains and other compounds to form silicone rubber. Silicone rubber possesses a number of unique properties: chemical resistance; fire resistance; excellent resistance to weathering; high friction; good non-stick properties; excellent flexibility; extreme heat and cold resistance; outstanding electrical, insulative and dielectric properties; and resistance to ultraviolet (UV), infrared (IR), microwave and radio frequency (RF).

DuraSil® Coated Fabric Characteristics

DuraSil® Fabrics are engineered to retain the distinctive properties of silicone, but by adding a glass fabric to the matrix, AFC is able to obtain the added benefits of dimensional stability, durability, excellent tensile strength and low elongation. DuraSil® Fabrics have received USDA approval for food processing and handling, and are FDA compliant (21 CFR177.2600). In addition, the DuraSil® Fabrics can operate in temperatures from -100°F to 500°F (-73°C to 302°C).

Typical Applications

Packaging:

- Shrink tunnel curtains

Food:

- Tray liners
- Cooking sheets

Aerospace, Communications & Military:

- Tank seals and contaminant barriers
- Gaskets, membranes, seals and diaphragms
- Protective curtains and aprons

Other Applications:

- Insulation and protection
- Release sheets/separation materials
- Expansion joints

Additional applications exist. Contact AFC for more specific information.

Why AFC?

The company's track record of accomplishment, coupled with its vast experience, makes it the logical business partner for customers interested in success. AFC makes the difficult look routine.



Core Values

Innovation

AFC has a history of developing new and innovative products for its customers. Evidence of their innovation can be seen in its listing of proprietary products and its patent activity.

"AFC has developed new products for us to bring to our customers.

A small company like ours could not survive without a partner like AFC." AFC Customer



Quality

AFC has dedicated itself to meeting the most rigorous standards in each product it is involved in producing, with particular focus placed on quality production techniques.

"We have dealt with several manufacturers, and AFC's product quality is superior, as is their customer service. AFC is always helpful; if an immediate answer is not available, a call back is always received promptly. I look forward to many more years of working together."

AFC Customer

Service

The cornerstone of AFC's success has been its steadfast commitment to customer service and satisfaction.

"AFC's delivery history and customer service have helped us grow our sales in new markets. Their technical assistance and customer service has helped us grow our business. We are proud to have them as a member of our team."

AFC Customer



DuraSil® Fabric Design Guide (Silicone Fabrics)

1. Select Material Style (from table below)

Need help? Contact your Distributor, OEM, or a member of AFC's Customer Service team to help you determine the fabric that would be best for your application.

Product ID	Color	Plies	Friction Surface	Nominal Thickness	Weight (lbs/sq yd)	Tensile-Warp (lbs/in)	Tensile-Fill (lbs/in)	Full Widths (in)
300-15	Red	1	N	.015"	0.87	200	160	40
300-20	Red	1	Y	.020"	1.15	320	280	52
300-25	Red	1	N	.025"	1.44	320	280	52
300-42	Red	2	Y	.042"	2.05	284	270	52
300-62	Red	3	Y	.060"	3.07	329	314	52
301-10	White	1	N	.010"	0.62	100	110	40
301-15	White	1	N	.015"	0.87	200	160	40
301-20	White	1	Y	.020"	1.15	200	280	52
301-25	White	1	N	.025"	1.44	320	280	52
301-42	White	2	Y	.042"	2.05	525	375	52
302-25	Black	1	N	.025"	1.44	280	280	52
302-42	Black	2	Y	.042"	2.05	525	375	52

* Although material width is standard, additional lead-time may be required.

Please note: Additional thicknesses, styles and widths available upon special request. Other colors are available in above styles. Consult factory.

Disclaimer: The above tensile values are from Table 6 of Specification D579 and actual tensile values will vary. AFC tests tensile strength to ASTM D828 and actual tensile values will be provided upon request.

2. Determine whether you desire full width or slit fabric:

- Full Width: Full width fabrics are available in the above widths and are ordered by lineal yard or lineal meter.
- Slit Width: Slit fabrics are available from 1/4" to the maximum width from the table and can be slit to the nearest 1/32 inch. Slit fabrics are available in 18 and 36-yard rolls. (For slit roll availability contact AFC.)

3. Select Your Width:

- Full Width: the above table reflects the respective available product widths
- Slit Width: inches or millimeters

4. Select Your Length:

- Full Width: lineal yards or meters in any length required
- Slit Width: 18 or 36 yard rolls

Full Width Design Example:

Material Style-300-20, Full Width-40", Length-20 yards

Slit Roll Design Example:

Material Style-301-25, Width 10", Length-36 yards

Did You Know?

Silicone is the second most abundant element on earth, composing 28% of the earth's crust and is only surpassed by oxygen which makes up 47%. As the main component in silicone, silicone is found in many everyday items as a compound such as sand, granite and clay. Silicone is also the main element in silica-glass, and as a result, silicone coated fabrics combine the temperature and chemical resistance of glass with the versatility of plastics.

Exceptional Service

With the shortest turnaround times in the industry, AFC has built its reputation upon its extraordinary service capabilities. Customer service hours are from 8:30 AM to 6:00 PM EST.

- Same Day Emergency Services: Most orders placed before 1:00 EST
- Next Day Emergency or Expedited Services
- Normal Service: Ships within 5 working days

Fabric Care

When handling, do not fold or crease the fabric. The material is susceptible to discoloration by ultra-violet light (turns white), but otherwise is unaffected by chemicals. To ensure maximum product life, be certain that the fabric stays within its specified temperature range.

Experience That Matters

Many companies in the industry boast of long and proud histories. However, no company can match AFC's over 150 years of combined senior management expertise.

As an experienced leader, AFC welcomes the challenges that less experienced companies cannot address; AFC calls them opportunities. While many companies have come and gone during the last 15 years, AFC has proven itself time and again to be a solid, grounded and dependable business partner. One that prides itself as a self-motivating, entrepreneurial spirited company. Perhaps our customers say it best.

"When you consider service, reliability and quality, AFC is a consummate supplier. Add to those qualities their flexibility, innovative abilities and knowledgeable customer service staff with a "can do" attitude, you have a company that makes doing business a truly pleasurable experience."

AFC Customer



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Fabrication Capabilities

AFC offers the following fabrication capabilities and services for its fabrics:

- Conveyor belting
- Custom fabric and tape slitting
- Custom die cutting
- Specialty fabrication
- Fabric and tape shearing
- Belt and fabric perforating

Fabric Treatments and Specialty Coatings

AFC can specially treat its fabrics to provide an adhesive (tape), bondable, abrasion resistant, or static-dissipative surface. In addition, the company also specialty coats fabrics to meet specific application needs.

Contact your local distributor or OEM to see for yourself the DuraSil® Advantage. Let AFC prove to you that it **Provides Value Beyond Price.**



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