

# TEADIT PTFE SOLUTIONS

## What is PTFE?

### Polytetrafluoroethylene:

A polymer with exceptional chemical resistance, Polytetrafluoroethylene (PTFE), is the most widely used plastic for industrial sealing. The only media that can chemically attack PTFE are liquid alkaline metals and free fluorine. PTFE has excellent electrical insulation, anti-stick, and impact resistance properties, as well as an extremely low coefficient of friction.

Extruding, laminating, and sintering either pure PTFE, or specially mixed with various reinforcing filler materials, results in gasket products with distinct physical and chemical properties to meet the needs of a wide array of sealing applications.



## TEALON® 1570

Restructured PTFE w/Glass Microspheres

Suitable for a wide variety of chemical applications, Tealon® 1570 also meets FDA conformance for service within food and pharmaceutical applications. Tealon® 1570 is the preferred material for fragile flanges, glass-lined equipment, and other applications that require a highly compressible gasket.

**Approvals: DVGW - TA-Luft - FDA**

## TEALON® 1580

Restructured PTFE with Barium Sulfate

1580 can be used in a wide range of applications due to its vast resistance to most chemical products, including both strong acids and strong caustics, making it the most diverse material within the Tealon family. With the off-white color of Tealon® 1580, this material is suitable for any process where contamination is a concern and meets conformance requirements for FDA and pharmaceutical applications.

Additionally, Tealon® 1580 has been BAM tested for suitability in oxygen service.

**Approvals: DVGW, TA-Luft, FDA, Chlorine Institute**

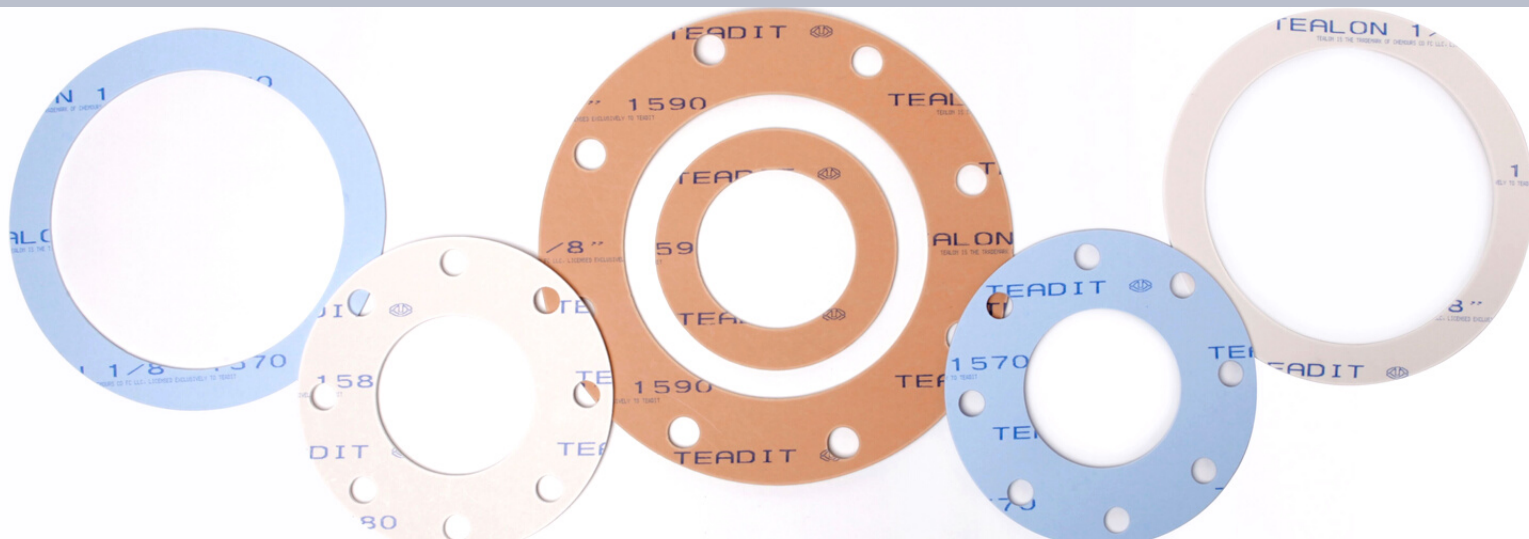
## TEALON® 1590

Restructured PTFE with Silica

Meeting a wide range of applications, Tealon® 1590 is suitable for general service, strong acids, and moderate caustic solutions. It meets FDA conformance for service within food and pharmaceutical applications.

**Approvals: DVGW, TA-Luft, FDA, Chlorine Institute**

# TEADIT | PTFE GASKET PRODUCTS: TEALON®



## Typical Physical Properties:

Compressibility - ASTM F36 M	25% - 40%
Recovery - ASTM F36 M	30%
Tensile Strength - ASTM F152	2030psi
Creep Relaxation - ASTM F38	40%
Sealability - ASTM F37 A	0.12 ml/h

ASTM test are based on 0.80mm sheet thickness and DIN test is based on 1.50mm sheet thickness. Tealon® is the trademark of Chemours CO FC LLC, licensed exclusively to Teadit.

Temperature	Minimum Service: -450°F (-268°C) Maximum Service: 500°F (260°C)
Pressure	Maximum service: 800 psi (55 bar)
pH	0-14
Color	Blue
Sheet Size	Size: 60" x 60"*
Thickness	1/32", 3/32", 1/16", 1/8", 1/4"

## Typical Physical Properties:

Compressibility - ASTM F36 M	4% - 10%
Recovery - ASTM F36 M	40%
Tensile Strength - ASTM F152	2030psi
Creep Relaxation - ASTM F38	15%
Sealability - ASTM F37 A	0.04 ml/h

ASTM test are based on 0.80mm sheet thickness and DIN test is based on 1.50mm sheet thickness. Tealon® is the trademark of Chemours CO FC LLC, licensed exclusively to Teadit.

Temperature	Minimum Service: -450°F (-268°C) Maximum Service: 500°F (260°C)
Pressure	Maximum service: 1200 psi (83 bar)
pH	0-14
Color	Off-White
Sheet Size	Size: 60" x 60"*
Thickness	1/32", 3/32", 1/16", 1/8", 1/4"

## Typical Physical Properties:

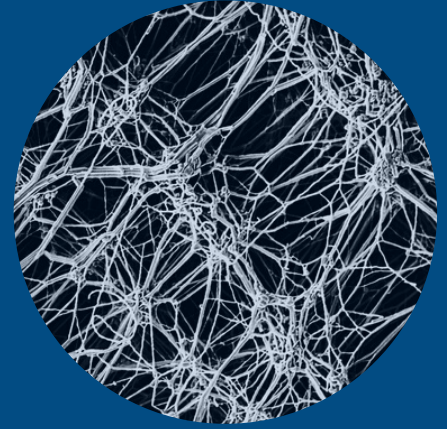
Compressibility - ASTM F36 M	5% - 15%
Recovery - ASTM F36 M	40%
Tensile Strength - ASTM F152	2030psi
Creep Relaxation - ASTM F38	18%
Sealability - ASTM F37 A	0.20 ml/h

ASTM test are based on 0.80mm sheet thickness and DIN test is based on 1.50mm sheet thickness. Tealon® is the trademark of Chemours CO FC LLC, licensed exclusively to Teadit.

Temperature	Minimum Service: -450°F (-268°C) Maximum Service: 500°F (260°C)
Pressure	Maximum service: 1200 psi (83 bar)
pH	0-14
Color	Fawn
Sheet Size	Size: 60" x 60"*
Thickness	1/32", 3/32", 1/16", 1/8", 1/4"

## EPTFE: EXPANDED PTFE

The next iteration in PTFE technology, expanded PTFE (or ePTFE) offers an alternative to overcoming the creep and cold flow tendencies of traditional PTFE without the need for fillers that can be susceptible to chemical attack. Made from 100% pure, virgin PTFE, this material is heated and expanded to produce a fibrous structure that gives the material greater tensile strength to naturally resist the aforementioned inherent creep. Additionally, ePTFE exhibits excellent compressibility characteristics which allows it to produce a reliable seal even in flanges with less-than-ideal surface conditions, and in stress limited connections like low-strength flanges and/or lined pipe and vessels.



## WHICH PTFE GASKET SHOULD I USE?

Services:	Strong Acids	Moderate Acids	Moderate Caustics	Strong Caustics	Steam	Fluorine <u>or</u> Molten Alkali Metals	Lined Vessels	FRP/Plastic Flanges	Monomer Service
1500	✓	✓	✓	✓	*	✗	✗	✗	✗
1525	✓	✓	✓	✓	*	✗	✗	✗	✗
1560	✓	✓	✓	✓	*	✗	✗	✗	✓
Tealon® 1570	✓	✓	✓	✗	✓	✗	✓	✓	✗
Tealon® 1580	✓	✓	✓	✓	✓	✗	✗	✗	✗
Tealon® 1590	✓**	✓	✓	✗	✓	✗	✗	✗	✗
24SH	✓	✓	✓	✓	✓	✗	✓	✓	✗

Pressure:	Class 150 (or equivalent)	Class 300 (or equivalent)	Class 600 & above (or equivalent)
1500	✓	*	✗
1525	✓	*	✗
1560	✓	*	✗
Tealon® 1570	✓	✓	✗
Tealon® 1580	✓	✓	✗
Tealon® 1590	✓	✓	✗
24SH	✓	✓	*

Temperature:	Cryogenic (as low as -450°F)	Continuous to 300°F	Continuous to 500°F	Spikes to 600°F
1500	✓	✓	*	✗
1525	✓	✓	*	✗
1560	✓	✓	*	✗
Tealon® 1570	✓	✓	✓	✗
Tealon® 1580	✓	✓	✓	✗
Tealon® 1590	✓	✓	✓	✗
24SH	✓	✓	✓	✓

\* : Consult with Teadit Engineering before use

\*\* : For Hydrofluoric Acid use Tealon® 1580 or 24SH

## 24B

### Expanded PTFE Joint Sealant

Teadit® 24B is made from 100% pure, expanded, virgin PTFE. The entire production process is subject to strict quality controls, registered under DIN EN ISO 9001. Teadit®24B can be used in a wide variety of static sealing applications due to the excellent thermal and chemical resistance characteristics of the product. The exceptional malleability of expanded PTFE can compensate for out-of-parallel flanges and/or damaged sealing surfaces, while also allowing for use with stress sensitive connections where only a limited flange load is available, e.g. plastic flanges, glass-lined flanges, etc.

Approvals: DVGW, WRc, FDA (incl. adhesive backing), TA-Luft, AREVA

Temperature	Min Service: -76°F Short Term: 600°F Max Service: 446°F
Pressure	2900 psi
pH	0-14



## 25BI

### Biaxially Expanded PTFE Gasket Tape

A special manufacturing process results in nearly equal tensile strength in both the longitudinal and transverse direction. As a result, the material does not change its width under compression. This is in stark contrast to traditional expanded PTFE tapes and joint sealants! Therefore, TEADIT 25BI is extremely well-suited as a gasket material for narrow sealing areas and in all applications where a defined gasket width (under load) is required. Like other expanded PTFE products, 25BI is also able to compensate for irregularities or damage on the sealing surface. Typical applications include enamelled and glass-lined flanges, heat exchangers, large diameter flanges and containers, pressure vessels, suction filters, strainers, etc.



Temperature	Min Service: -450°F Short Term: 600°F Max Service: 500°F
Pressure	2900 psi
pH	0-14

## ECO-TAPE

### Thread seal tape made from Expanded PTFE combined with Graphite

ECOTape-LE® is manufactured to provide an advanced structural matrix that incorporates graphite into the expanded PTFE. Due to the excellent properties of both PTFE and graphite, this combination ensures a wide degree of chemical resistance, low coefficient of friction, excellent heat dissipation due to the high thermal conductivity of graphite, and superior mechanical resistance.

Our unique manufacturing process provides the final product a high degree of integrity proven to supply the best sealing solution for thread seal tape.

Temperature	Min Service: -400°F Short Term: 590°F Max Service: 518°F
Pressure	2900 psi
pH	0-14



## 24SH

### 100% pure, Biaxially Expanded PTFE Sheet

Teadit® 24SH is a universally employable gasket material for nearly any application. It is suitable for all types of flanges, nearly all media, a wide temperature range, and even for applications with the most stringent purity requirements. It is inherently clean and non-toxic, has minimal creep at elevated temperatures, and makes repairing small damages and/or irregularities of the sealing area (flange surface) unnecessary due to its excellent malleability. At the same time, Teadit® 24SH remains rigid enough to allow for the ease of installation comparable to other less compressible materials, and can easily be removed during gasket changeout without residue.



Temperature	Min Service: -450°F Short Term: 600°F Max Service: 500°F
Pressure	2900 psi
pH	0-14

## 1500

### Virgin PTFE Sheet

Style 1500 PTFE is a high molecular weight polymer and one of the most versatile plastics known to man. Style 1500 virgin PTFE sheet can handle virtually all chemicals in the 0-14 pH range with the exception of molten alkali metals and elemental fluorine. This style is particularly recommended for applications in the food and beverage industry where high purity materials are required. It is also used where contamination or discoloration of flow media cannot be tolerated.

Temperature	Min Service: -328°F Max Service: 500°F
Color	White
Availability	Size: 48" x 48" 60" x 60" 48" x 60" cont. rolls
	Thickness: 1/64", 1/32", 1/16", 3/32", 1/8", 3/16", 1/4"

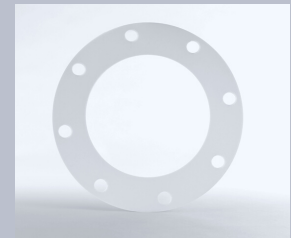


## 1525

### 25% Glass Filled PTFE Sheet

Style 1525 incorporates a fiberglass filler to significantly reduce the cold flow and creep inherent to virgin PTFE, while also increasing the wear resistance compared to an unfilled sheet. It can handle a broad range of chemicals with the exception of molten alkali metals and elemental fluorine. This style is suitable for service temperatures from the cryogenic range up to 350°F.

Temperature	Min Service: -328°F Max Service: 350°F
Color	White
Availability	Size: 48" x 48" 60" x 60" 48" x 60" cont. rolls
	Thickness: 1/64", 1/32", 1/16", 3/32", 1/8", 3/16", 1/4"



## 1560

### Restructured PTFE for Monomer Service

1560 is manufactured by a unique process, which provides a high level of fibrillation to overcome the creep relaxation and cold flow problems associated with normal (skived or molded) PTFE sheets. This style is produced from virgin PTFE resin without fillers or additives. Due to the product's low permeability, it is recommended for applications where media permeation through the gasket is not acceptable. TF1560 is quick and simple to install and the gasket can be removed easily after use and without residue.

Temperature	Min Service: -450°F Max Service: 500°F
Color	White
Availability	Size: 40" x 40"
	Thickness: 1/16", 1/8", 1/4"
pH	0-14



# TEADIT | PREMIUM PTFE GASKET PRODUCTS

## TEALON® TF1572 SAN

NSF-61 certified Restructured PTFE

Tealon® 1572 SAN is suitable for service with a wide variety of aggressive media, but is specifically formulated to allow compliance for drinking water system components under NSF-61, from source to tap. Certification to NSF-61 provides assurance to the highest level that Tealon® 1572 SAN is safe for use in drinking water service. The high compressibility of this style makes it particularly suitable for use with stress sensitive and/or fragile flanged joints, e.g. glass, ceramics, plastic, etc.

An added benefit is that Tealon® 1572 SAN has a strong dielectric rating, making it suitable for isolation kit applications.

Tealon® 1572 SAN is a restructured PTFE material manufactured by a unique process which provides a high level of fibrillation to overcome the creep relaxation and cold flow problems associated with normal (skived or molded) PTFE sheets. This style is produced from virgin PTFE resin filled with hollow glass microspheres.



Certified to NSF/ANSI/CAN 61



Temperature	Min Service: -450°F Max Service: 500°F
Pressure	Max Service: 800 bar
Color	Blue
Sheet Size	Size: 60" x 60"
	Thickness: 1/16", 1/8"

### Typical Physical Properties:

Compressibility - ASTM F36 M	30% - 50%
Recovery - ASTM F36 M	30%
Tensile Strength - ASTM F152	2030 psi
Specific Gravity -ASTM D792	1.70 g/cm3
Creep Relaxation - ASTM F38	40%
Sealability - ASTM F37 A	0.12 ml/h
Sealability - DIN 3535	< .015 cm3/min

ASTM test are based on 0.80mm sheet thickness and DIN test is based on 1.50mm sheet thickness. Tealon is the trademark of Chemours CO FC LLC, licensed exclusively to Teadit.

## ORIGIN™ RC510 GASKET

Rail Car Gasket

Teadit's award winning Origin™ RC510 gasket is designed specifically for railcar manway dome lid applications. It is a restructured hollow glass microspheres filled PTFE gasket, manufactured utilizing Teadit's unique Origin™ process technology. This provides excellent torque retention, high sealability, and extended gasket life over multiple cycles. It is user friendly and overcomes the problems of installation and removal associated with gaskets that are molded or produced from traditional sheet materials.

The Origin™ RC510 is extremely robust, allowing for long-life in service. Rigorous evaluation has yielded results that show how the RC510 outperforms any railcar gasket currently on the market. There is nothing else like it!

- U.S. Patented
- Excellent Sealability
- Elevated Torque Retention
- Easy to Install and Uninstall



Color	Cont. Service: -328°F Max Service: 250°F
pH	0-14
Industry Standard Bubble Test	35psi, pressurized no leakage
Initial Bolt Load Retention Test	Tested up to 40 cycles



**Teadit's Origin™ Technology has won 4 awards (pictured to the right) for it's innovative sealing abilities and a 5th award for it's 100% reduction scrap materials.**





## **Teadit North America**

**10545 Red Bluff Rd.  
Pasadena, TX 77339**

**sales@teadit.com  
1-800-999-0198**

**Rio de Janeiro & Campinas, BRAZIL - Buenos Aires, ARGENTINA - Houston, USA - Kufstein, AUSTRIA - Köln, GERMANY -  
Baroda, INDIA - Suzhou, CHINA**

**www.teadit.com**

Revised 04/2021