

# TFE pipe joint tape

Spec Sheet #S00008  
February 2004-1

## Tape and Packing



### DESCRIPTION

An economical, low density grade of polytetrafluoroethylene (PTFE) pipe joint tape for sealing threaded pipe, valves, fittings, accessories and controls including those made from steel, galvanized and black iron, brass, copper, aluminum, stainless steel, glass, synthetic rubber, and all plastics.

**TFE pipe joint tape** is weather resistant, flexible, non-stick, non-flammable, low dielectric constant, chemically inert and usable at low temperatures. Joints made with **TFE pipe joint tape** will not "freeze," seize, or harden with age.

Product withstands temperatures from -450° to 500°F and pressures to 10,000 lbs. psi. Meets or exceeds performance requirements for use on oxygen lines under MIL-T-27720A (ASG). Since **TFE pipe joint tape** is chemically inert, it is resistant to chemicals, heat, corrosion and impact making it suitable for many applications including use on chemical processing equipment, electrical insulation and mechanical applications. The lubricity of polytetrafluoroethylene helps make threaded joints easy to assemble and disassemble, so product is excellent for applications which are subject to frequent dismantling. White color for universal use.

In applications where a heavier gauge, easier to apply, higher density product is desirable, **Hercules Tape dope**® may be preferable to **TFE pipe joint tape**.

### SIZES AND PACKING

STOCK NO.	SIZE	PACKING	WEIGHT/CASE
15104*	1/2" x 60"	72 (6-1 dz.)	2.7 lbs.
15108*	1/2" x 260"	72 (6-1 dz.)	3.7 lbs.
15162	1/2" x 260"	144	3.7 lbs.
15164	1/2" x 520"	144	4.5 lbs.
15169	1/2" x 1296"	36	2.7 lbs.
15176	3/4" x 520"	36	1.6 lbs.
15183	1" x 520"	36	2.0 lbs.

\* Carded, Blister Pack

Specifications

TFE pipe  
joint tape



# BLUE MONSTER™ PTFE Thread Sealant

**BLUE MONSTER** is a rugged, general purpose PTFE Thread Seal Tape in a monstrous 1429" roll!



**Professional-grade density and five times more tape!**

*Blue Monster is a blue color-coded, professional-density, PTFE thread sealing tape for hundreds of applications. It creates dependable, leak-proof joints.*

Blue Monster is not too thick and not too thin. It was developed by Mill-Rose in response to the demand for a higher-quality PTFE sealing tape that is easier to apply.

Blue Monster is rugged, not flimsy like most thread seal tapes on the market. Blue Monster has not been stretched during the manufacturing process, so it is thicker and creates a more effective seal with less tape, and no need for pipe dope.

**Blue Monster thread sealing tape** is manufactured from PTFE resin, a polymer consisting of recurring tetrafluoroethylene monomers whose formula is  $(CF_2-CF_2)_n$ . It is inert and compatible with a very wide range of materials. Use *Blue Monster* on threads made from galvanized steel, iron, brass, copper, aluminum, stainless steel, polyethylene, polypropylene, PVC, CPVC, ABS, fiberglass and more. It can be used on pipes carrying the following:

- Acids, concentrated (see precautions)
- Acids, dilute
- Air, compressed
- Alcohols

- Aliphatic solvents
- Ammonia, liquid
- Aromatic solvents
- Caustics, concentrated (see precautions)
- Chlorinated solvents
- Cutting oils
- Diesel fuel oil
- Ethylene glycol
- Fatty acids
- Gasohol
- Glycerine
- Heating oils
- Hydraulic fluids
- Hydraulic oils
- Hydrogen, gaseous and liquid
- Inert gases, gaseous and liquid
- Jet fuel
- Kerosene
- Ketones
- Liquid Petroleum Gas
- Mineral oils
- Natural gas
- Nitrogen, gaseous and liquid
- Petroleum solvents
- Soap, liquid
- Steam
- Vegetable oils
- Water

For a more-detailed list of chemicals compatible with *Blue Monster*, contact Mill-Rose.



- **A new, thicker, professional-grade density**
- **Monstrous roll (1/2"x1429")**
- **Seals threads effectively in more applications**
- **No need for pipe dope.**
- **Easier to use - no waste!**
- **All purpose - use on iron, brass, copper, aluminum, stainless steel, galvanized steel, polyethylene, polypropylene, PVC, CPVC, ABS, fiberglass and more.**

## Characteristics

- Compatible with a broad range of gases and liquids
- Compatible with a broad range of piping materials
- Will not harden or crack on the joints
- Effective across a broad range of temperatures and pressures
- Acts as a thread lubricant and anti-seize
- Prevents electrolytic corrosion of threads
- No curing time
- Unlimited shelf life
- Non-flammable

- Non-toxic
- Clean



**Point-of-sale display contains 45 rolls.**

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# BLUE MONSTER™ PTFE Thread Sealant

## Blue Monster Thread Sealing Tape

*A blue color-coded, professional-density, PTFE thread sealing tape for hundreds of applications. It creates dependable, leak-proof joints.*

### Specifications

Composition	99.6% PTFE < 0.4% Pigment
Color	Blue
Length	1429"
Width	1/2" (12mm)
Thickness	0.0035" +/- 10%
Density	0.8g/cm <sup>3</sup>
Elongation	>100%
Tensile strength	15N / mm <sup>2</sup>
Pressure rating	Mill-Rose <i>Blue Monster</i> Thread Sealing Tape has been used to seal fittings carrying water and oil at pressures up to 10,000 PSI or 69,000kPa <b>Note.</b> Pressure ratings are relative to the quality and torque of the fittings and the amount of tape used.
Temperature range	-450°F to +500°F (-268°C to +260°C) PTFE is completely stable up to +500° F or +260° C. Decomposition is slow up to 750°F or 400°C. Although decomposition will occur on contact with naked flames.

### Precautions

**Note.** Keep Mill-Rose *Blue Monster* Thread Sealing Tape clean. Replace the clip on the spool after use. Store in a clean place. PTFE is virtually chemically resistant to all media, however there are a few exceptions. Alkali metals such as elemental sodium, potassium and lithium are to be avoided. These alkali metals remove fluorine from the polymer molecule. Extremely potent oxidizers such as fluorine (F<sub>2</sub>) and related compounds (e.g., chlorine trifluoride (ClF<sub>3</sub>)) can be handled by PTFE, but only with great care. Since fluorine is absorbed into the resin, the mixture becomes sensitive to a source of ignition such as impact. Other media to avoid are 80% NaOH or KOH, metal hydrides such as boranes (e.g., B<sub>2</sub>H<sub>6</sub>), aluminum chloride, ammonia (NH<sub>3</sub>), certain amines (R-NH<sub>2</sub>), imines (R-NH) and 70% nitric acid at temperatures near the suggested service level.

**Do not use Mill-Rose *Blue Monster* Thread Sealing Tape on oxygen lines!**

Mill-Rose recommends Green Oxygen Tape for oxygen lines. For further safety details consult the Material Safety Data Sheet.

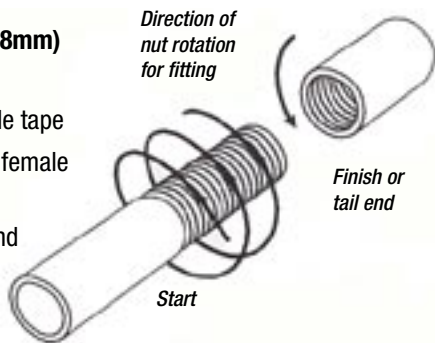


**Note.** Mill-Rose *Blue Monster* Tape is compatible with most gases, but for gas lines, Mill-Rose *3-Wrap* Yellow Gas Seal Tape is recommended.

### Instructions

#### Fittings up to 1 1/2" (38mm) diameter

- Use 1/2" (12mm) wide tape
- Clean the male and female threads thoroughly
- Wrap the tape around the male thread. Take care to keep the tape under tension as you are wrapping so the tape molds itself into the root of the thread.
- Make sure that you wrap with the thread.
- Make sure that the tape does not overlap the end of the fitting.
- Three wraps seal most threads.



**Note.** For poor quality or damaged threads, or threads that are hard to seal like parallel threads, or threads on fittings subject to vibration, more than three wraps may be necessary.

### Limited Liability

The information presented is in good faith, but no warranty is given nor are the results guaranteed. Since we have no control over the physical conditions surrounding the application of information herein contained, Mill-Rose disclaims any liability for untoward results.

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## Tape and Packing



### APPROVALS AND LISTINGS

Meets MIL-T-27730A (ASG)

### SPECIFIC USES

Use **TFE pipe joint tape** for sealing threaded pipes, valves, fittings and accessories.

### SPECIFIC APPLICATIONS\*

**TFE pipe joint tape** can be used for repairs and maintenance of any threading application in plumbing, mechanical and chemical processing equipment, or as electrical insulation due to its low dielectric properties.

### PHYSICAL PROPERTIES

Solubility:	Not soluble in water, organic solvents, acids or bases.
Reactivity:	Chemically inert to most chemicals.
Flammability:	Non-flammable.
Thickness:	3.0 mils min.
Temperature Use Range:	-450°F to 500°F.
Appearance/color/odor:	White tape. No odor.

### WARNINGS OR CAUTIONS

- Read all cautions and directions carefully before using product.
- Avoid prolonged exposure to fumes given off at temperatures over 500°F
- Should not be used on high-speed shafts where the surface speed exceeds 150 sfpm.

### DIRECTIONS FOR USE

- 1) Hold roll in the palm of the hand. Lay end of **TFE pipe joint tape** on male threads as close as possible to end of threads without overlapping edge. Hold end of **TFE pipe joint tape** firmly and apply clockwise on standard threads stretching tightly as you wind.
- 2) Continue to wind and stretch tape tight so tape seats in threads. At least one and half turns for joints under 2", twice around on 2" and larger sizes.
- 3) Complete circle and overlap starting point about 1/2". Since **TFE pipe joint tape** has no adhesive, be sure to continue holding tightly until tape is firmly overlapped.
- 4) Tear tape by pulling in the same direction as you were winding until it separates. Smooth torn end by running fingers over it in the same direction it was applied. Tape will adhere to itself. Make up joint or connection in normal manner. For heavy duty applications use **Hercules tape dope**® high density polytetrafluoroethylene thread sealing tape.

### MATERIAL SAFETY INFORMATION

**FOR MORE INFORMATION ON THIS PRODUCT, REQUEST MATERIAL SAFETY DATA SHEET (MSDS) #8**

For Delivery by Fax	Call 1-800-942-4636
Internet	See MSDS section of <a href="http://www.herchem.com">www.herchem.com</a>
Mail	Contact Hercules at address below or any Hercules representative.

HMS Hazard Warning 0-0-0-A.

INGREDIENTS	CAS#
Polytetrafluoroethylene	9002-84-0

This product is not classified as hazardous in accordance with 29 CFR OSHA 1910.1200.

\* For special applications which may not be covered on this or other Hercules literature, please contact Hercules Technical Services Department by phone at 1-800-221-9330 or send a fax to 1-800-333-3456.



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