For Oxygen Service Sealing Applications

BLUE MONSTER® OXY CLUTCH

A Color-Coded, Oxygen Compatible, Full-Density PTFE Thread Sealing Tape

Blue Monster OXY-Clutch Green Oxygen Tape is a maximum density, PTFE thread sealing tape designed specifically for oxygen lines.

This special thread sealing tape is manufactured from PTFE resin mixed with a small amount of solvent. For normal applications it does not matter if the solvent is not removed from the finished product. However, when operating in a pure oxygen environment remaining volatiles can react with the oxygen and cause an explosion. So Blue Monster OXY-Clutch Tape is put through a rigorous process to remove the solvent.

Blue Monster OXY-Clutch Tape is a thick, maximum-density thread sealing tape ensuring an effective seal. Also, as an important safety feature, Blue Monster Oxygen tape is pigmented green to ensure that the fitter or inspector can easily recognize that the tape is compatible with oxygen.

Characteristics

- Compatible with gaseous or liquid oxygen
- Compatible with a broad range of gases and liquids.
- Compatible with a broad range of piping materials
- Will not harden or crack on the joint
- No curing time
- Effective across a broad range of temperatures
- Acts as a thread lubricant and anti-seize
- Prevents electrolytic corrosion of threads
- Clean, Non-toxic and Non-flammable
- Indefinite shelf life

Applications

Blue Monster OXY-Clutch Green Oxygen Tape is manufactured from PTFE resin, a polymer consisting of recurring tetrafluoroethylene monomers whose formula is (CIF -CIF)n. It is one of the 23 most inert substances known. Therefore, it is compatible with a very wide range of materials. It can be used on pipe made from galvanized steel, iron, brass, copper, aluminum, stainless steel, polyethylene, polypropylene, PVC, CPVC, ABS and fiberglass. It can also be used on pipes carrying the following materials:

- Acids, concentrated (see precautions)
- Acids, dilute
- Air, compressed
- Alcohols
- Aliphatic solvents
- Ammonia, liquid
- Aromatic solvents
- Caustics, concentrated (see Precautions)
- Caustics, dilute
- Chlorinated solvents
- Cutting oils
- Diesel fuel oil
- Ethylene glycol
- Fatty acids
- Gasohol
- Gasoline
- Glycerin
- Heating oils
- Helium, gaseous
- 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
- Oxygen, gaseous and liquid
- Petroleum solvents
- Soap, liquid
- Steam
- Vegetable oils
- Water

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

Cat #	Size	Case Pack	Weight
70850	1/2" x 260" roll	10	0.4 lbs.
70852	3/4" x 260" roll	6	0.3 lbs.
70854	1" x 260" roll	6	0.5 lbs.

For Material Safety Data Sheets, contact Mill-Rose or download directly from the Mill-Rose Clean-Fit website.

MILL-ROSE Clean-Fit Products
7310 Corporate Blvd., Mentor, OH 44060
Orders 800.321.3598 or fax 440.255.1072 | cleanfit.com | info@cleanfit.com

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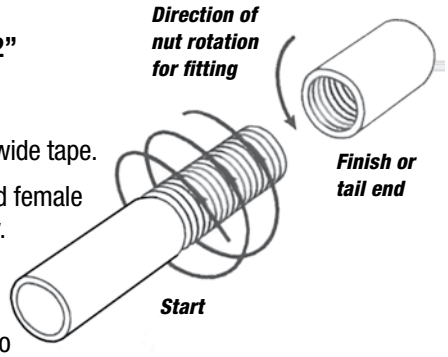
Specifications

Composition: 99.6% PTFE < 0.4% pigment	
Color: Green	
Thickness: 0.004" +/- 10% (.102mm +/- 10%)	
Density, apparent: 1.5g/cm3 +/- 10%	
Elongation: >100%	
Pressure rating:	Blue Monster Green Oxygen Tape has been used regularly on oxygen fittings at pressures up to 2,173.9PSI or 15,000kPa Note. 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.
Tensile Strength 12.5N/mm average	

Instructions

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



1. Use 1/2" (12mm) wide tape.
2. Clean the male and female threads thoroughly.
3. 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.
4. Make sure that you wrap with the thread.
5. Make sure the tape does not overlap the end of the fitting.
6. Three wraps seals most threads.

Fittings above 1-1/2" (38mm) diameter.

1. Use 3/4" (19mm) wide tape for fittings up to 2" (51mm) in diameter. Use 1" (25mm) wide tape for fittings larger than 2" (51mm) in diameter.
2. Follow the directions given above.

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 two wraps may be necessary.

Precautions

Note. Keep Blue Monster OXY-Clutch Tape clean! Do not store where it is likely to become contaminated by mineral, vegetable or animal oils and greases or any other chemical likely to react violently with oxygen. Replace the clip on the spool after use and store in a clean place. Wash all possible contaminating substances from your hands prior to use. If contamination in the work place is a problem, we recommend Blue Monster Green Oxygen Tape in the sealed clipper/dispenser. Contact Mill-Rose for further information.

PTFE is virtually chemically resistant to all medias, 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 (F2) and related compounds (e.g., chlorine trifluoride (ClF3) 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 (e.g., B2H6), aluminum chloride, ammonia (NH3), certain amines (R-NH2), imines (R-NH) and 70% nitric acid at temperatures near the suggested service level. For further safety information, consult the Material Safety Data Sheet.

Approvals

Meets or exceeds A-A58092 and MIL-T-27730A Standards.

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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