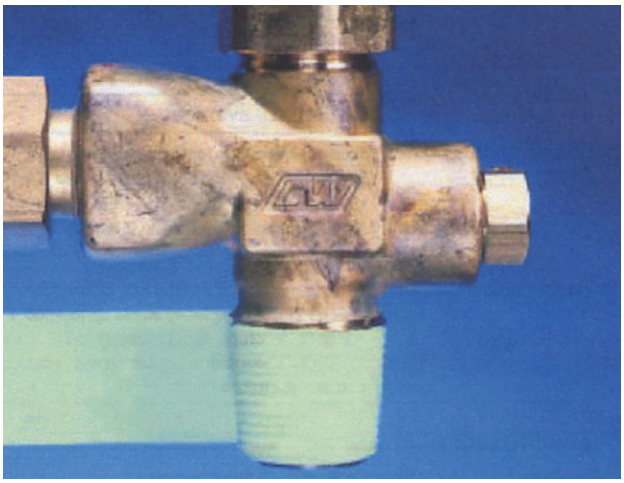
ResTape Green Oxygen Thread Seal PTFE Tape

A color-coded, oxygen compatible, full density, PTFE thread-sealing tape.

cat.# 22485



ResTape
The Right Tape for the Job

Description

ResTape Green Oxygen Tape is a full (maxium) density thread-sealing tape designed specifically for oxygen lines that 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. Therefore, ResTape Green Oxygen Tape is put through a rigorous process to remove the solvent. Furthermore, because ResTape Green Oxygen Tape is a thick, full-density thread-sealing tape the fitter can be assured of an effective seal. As an important safety feature, Res-Tape Green 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
· Non-flammable
· Indefinite shelf life
· Exceeds MIL-T-27730A

Applications

ResTape Green Oxygen Tape is manufactured from PTFE resin, a polymer consisting of recurring tetrafluoroethylene monomers whose formula is $(ClF_2 - ClF_3)n$. One of the most inert substances known it is compatible with a very wide range of materials. ResTape Green Oxygen Tape can be used on pipe made from galvanized steel, iron, brass, copper, aluminum, stainless steel, polyethylene, polypropylene, PVC, CPVC, ABS or fiberglass. It can be used on pipes carrying the following materials:

· Acids, concentrated (see precautions) or dilute
· Air, compressed
· Alcohols
· Aliphatic solvents
· Ammonia, liquid
· Aromatic solvents
· Caustics, concentrated (see precautions) or 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 or liquid
· Inert gases, gaseous or liquid
· Jet fuel
· Kerosene
· Ketones
· Liquid petroleum gas
· Mineral oils
· Natural gas
· Nitrogen
· Oxygen, gaseous or liquid
· Petroleum solvents
· Soap, liquid
· Steam
· Vegetable oils
· Water

Instructions

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

1. Use 1/2" (12 mm) wide tape.
2. Clean the male and female threads thoroughly.
3. Wrap the tape around the male thread, making three complete wraps. 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 (see Figure 1). Make sure that the tape does not overlap the end of the fitting. Three wraps seals most threads.

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

1. Use 3/4" (19 mm) wide tape for fittings up to 2" (51 mm) in diameter. Use 1" (25 mm) wide tape for fittings larger than 2" (51 mm) in diameter. Contact Restek for ordering information.
2. Follow steps 2-3 above.

Note

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

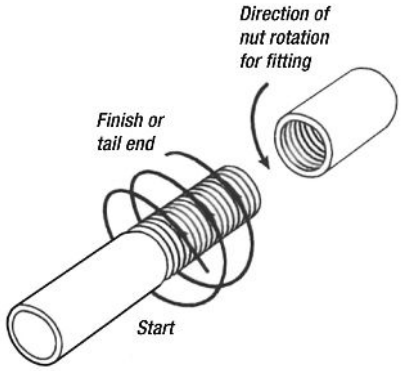
Precautions

Keep ResTape Green Oxygen Tape clean! Do not store ResTape Green Oxygen Tape where it is likely to become contaminated by mineral, vegetable or animal oils or greases or any other chemical likely to react violently with oxygen. Replace the clip onto the spool after use and store in a clean place. Wash all potential contaminating substances from your hands prior to use. PTFE is virtually chemically resistant to all media, however, there are a few exceptions. Alkali metals such as elemental sodium, potassium or lithium are to be avoided; they remove fluorine from the polymer molecule. Extremely potent oxidizers such as fluorine (F_2); chlorine trifluoride (ClF_3) and related compounds can be handled by PTFE, but only with great care. Fluorine is absorbed into the resin, and 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_2H_6), aluminum chloride, ammonia (NH_3), certain amines ($R\text{-}NH_2$), 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

ResTape Green Oxygen Tape has been approved for worldwide use by the British Oxygen Company (B.O.C.). ResTape Green Oxygen Tape also has been tested and approved by Bundesanstalt Fur Materialforschung und-Prufung (Germany).

Figure 17 Make sure that you wrap **with** the thread.



Specifications

Composition	99.6% PTFE < 0.4% pigment
Color	Green
Length	260" (USA) only; 0.12 m (international)
Width	1/2" (12 mm)
Thickness	0.102 mm +/- 10%
Density, apparent	1.5 g/cm³ +/- 10%
Elongation	>100%
Pressure rating	ResTape Green Oxygen Tape has been used regularly on oxygen fittings at pressures up to 2,173.9 PSI or 15,000 kPa. 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	12.5 N/mm² average

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Contact Technical Service at 1-800-356-1688, 1-814-353-1300, ext. 4, or support@restek.com (or contact your Restek representative) if you have any questions about this product or any other Restek product.

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