

GasShield[®]
For use in Natural Gas & Liquefied Petroleum Gas Applications

Streamline[®] GasShield[®] Coated Copper Tube comes coated with a yellow layer of seamless polyethylene. Commonly used with the distribution of natural and LP gas, GasShield Coated Copper Tube provides all the performance and reliability for which Streamline Copper Tube is known but with the added advantage of high visibility, easy identification and enhanced protection by isolating the copper tube from corrosive environments.



Standard Features

- .025" (minimum) polyethylene coating is extruded onto the copper providing consistent corrosion protection
- Made to ASTM & NFPA Standards
- Continuously marked with size, specification information, manufacturing code & footage every 2 feet
- Custom products & markings available upon request
- Made in Canada

Advantages

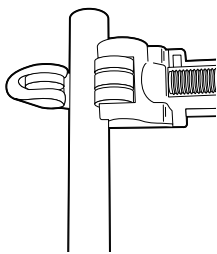
- Eliminates the need for continuous on-site tape wrapping or sleeving, creating a savings on labor & professional looking installation
- Coated tube is suitable for direct burial in concrete slabs
- Compatible with standard solder fittings & brazing techniques (alternative joining systems must comply to manufacturer's specs)
- Manufactured to reduce work hardening & stress corrosion cracking
- Provides protection against galvanic reaction

Taping of tube ends and joints is recommended for all installations of GasShield plastic-coated copper tube.

NOTE: For safety reasons, turn off gas to the line and make sure no gas is present before commencing the procedure for joining or for taping the ends.

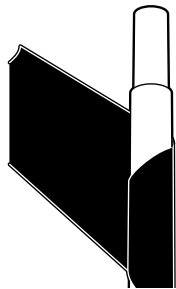
Taping and Preparation Procedure for Ends of Tube

Both ends of the tube should be taped with 2" wide Polyken-936-30 tape or equivalent (high U.V. Resistant/High tack joint wrap tape).

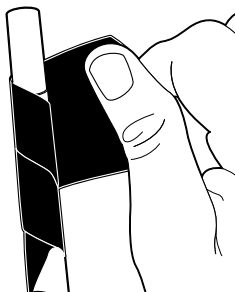


1. Select the terminal end of plastic coated tube. Strip back three inches of the plastic coating creating a clean-cut end and then proceed to complete solder connection. Ensure that the newly exposed copper and plastic coating (that will be covered by the tape) is clean and dry.

NOTE: If using a blowtorch, take care to keep the flame away from the plastic cover

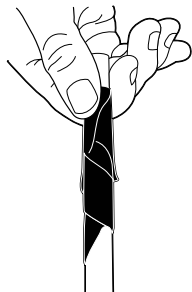


2. Cut approximately 8" of tape and attach one end of the tape to the plastic coating, starting 2" from the end of the coating and wrap at an angle of approximately 45 degrees. Apply firm pressure to this end of the tape to ensure that it adheres to the coating. Wrap the tape around the tubing, maintaining strong tension on the tape and ensuring that the edge of the tape applied directly to the copper does not wrinkle.



3. Once at least one full wrap has been made around the copper section of tube, continue wrapping the tape in the reverse direction. When wrapping in the reverse direction, the remaining tape should be applied to the previously laid tape, not to the copper or plastic coating. Trim any excess tape if necessary.

4. Repeat steps 1 through 3 on the other end of the tube.

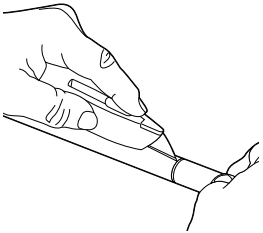
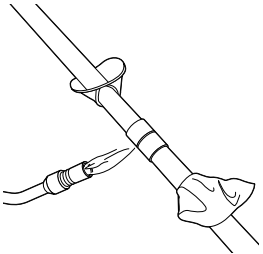
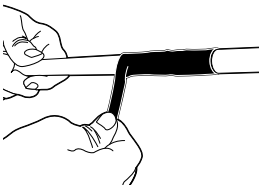


5. Turn the gas back on and check for leaks at both ends. A soapy-water solution should be used to check for leaks at tube ends where tape was placed. Follow the testing procedure requirements of applicable codes governing the intended service.

NOTE: If bubbles appear, remove the tape at the end of the tube and repeat steps 1 through 5. Periodic bubble testing of the tape at the ends of the tube is recommended. If bubbles appear, remove the tape at the end of the tube and repeat steps 1 through 5.

Taping of tube ends and joints is recommended for all installations of GasShield plastic-coated copper tube.

NOTE: For safety reasons, turn off gas to the line and make sure no gas is present before commencing the procedure for joining or for taping the ends.

Taping Procedure for Joining:	
	1. Cut and fold back plastic cover to reveal the copper tube.
	2. Install solder fittings in accordance with manufacturer's instructions and local codes. <i>NOTE: If using a blowtorch, take care to keep the flame away from the plastic cover.</i>
	3. When the joint is complete and cool, replace the plastic coat and wrap the joint to give continuity of protection. <i>NOTE: Polyken-936-30 tape or like equal high U.V. Resistant/High tack joint wrap tape is recommended to wrap the joint.</i>

Polyethylene-Coated Copper Tube

Nom Dia.	O.D. Dia.	TYPE K		TYPE L		COATED ACR		REFRIGERATION
		Lengths	Soft Coils	Lengths	Soft Coils	Type K	Type L	Soft Coils
1/4"	3/8"	-	60 ft., 100 ft.	-	60 ft., 100 ft.	-	-	50 ft., 100 ft., 250 ft.
3/8"	1/2"	-	60 ft., 100 ft.	-	60 ft., 100 ft.	-	-	50 ft., 100 ft., 250 ft.
1/2"	5/8"	20 ft.	60 ft., 100 ft.	20 ft.	60 ft., 100 ft.	20 ft.	20 ft.	50 ft., 100 ft., 250 ft.
5/8"	3/4"	20 ft.	60 ft., 100 ft.	20 ft.	60 ft., 100 ft.	20 ft.	20 ft.	50 ft., 100 ft.
3/4"	7/8"	20 ft.	60 ft., 100 ft.	20 ft.	60 ft., 100 ft.	20 ft.	20 ft.	50 ft., 100 ft.
1"	1-1/8"	20 ft.	60 ft., 100 ft.	20 ft.	60 ft., 100 ft.	20 ft.	20 ft.	50 ft., 100 ft.
1-1/4"	1-3/8"	20 ft.	60 ft., 100 ft.	20 ft.	60 ft., 100 ft.	20 ft.	20 ft.	-
1-1/2"	1-5/8"	20 ft.	-	20 ft.	-	20 ft.	20 ft.	-
2"	2-1/8"	20 ft.	-	20 ft.	-	20 ft.	20 ft.	-

Mueller Industries' GasShield meets the applicable requirements of the following codes:

- NFPA 54 National Fuel Gas Code*
- International Fuel Gas Code - 2006*
- International Residence Code - 2006*
- CAN/CSA 149.1-05*
- Uniform Mechanical Code

*Third party certified by Intertek Testing Services

Copper

- Copper Alloy is seamless UNS C12200 grade

Polyethylene

- Available in yellow for natural & LP-Gas applications
- Low density polyethylene (LDPE) resin, contains UV inhibitors
- Meets ICC requirements for minimum thickness of corrosion protective sheathing
- Operating temperatures are in the range of 0°F - 180°F with the coating remaining flexible down to -40°F
- Provides adequate barrier to prevent galvanic corrosion

The following are the three elements that cover the language needed for engineering specifications to allow the use of GasShield[®] in natural gas and liquefied petroleum applications.

Part 1 – General

1.1 Summary

- A. GasShield[®] copper tube provides protection against corrosive environments and abrasive damage through a .025" minimum wall thickness of Polyethylene LDPE resin.
- B. GasShield[®] copper tube is continuously marked with size, specification information, manufacturing code and footage every two feet.

Part 2 – Materials

2.1 Materials General

- A. All material applicable to the production of GasShield[®] copper tube meets corresponding requirements for ASTM and NFPA codes and standards along with CAN/CSA B139.

2.2 GasShield[®] Material

A. Copper Tube

- 1. Refrigeration Standard Copper Tube manufactured with UNS C12200 Copper Alloy.

B. Polyethylene Coating

- 1. Color coated yellow to establish use with petrochemical applications.
- 2. Coating low density polyethylene LDPE resin which enhances common corrosion protection associated with standard natural gas and liquefied petroleum production and distribution environments.
- 3. Contains UV inhibitors minimize derogation if exposed ultra violet light.
- 4. Extruded seamlessly onto copper tubing with a minimum wall thickness of .025"
- 5. Operating temperature is in the range of 0°F – 180°F.
- 6. Polyethylene coating will remaining flexible down -40°F.
- 7. Provides an adequate barrier between dissimilar metals to prevent galvanic corrosion.

Part 3 – Installation

3.1 Installation and Usage

- A. GasShield tube should be installed and used in accordance with appropriate specifications and codes or based upon Mueller Industries technical recommendations.
- B. Copper and brass tubing shall not be used if the gas contains more than an average of 0.3 grams of hydrogen sulfide per 100 standard cubic feet of gas (0.7 milligrams per 100 liters).