Streamline®

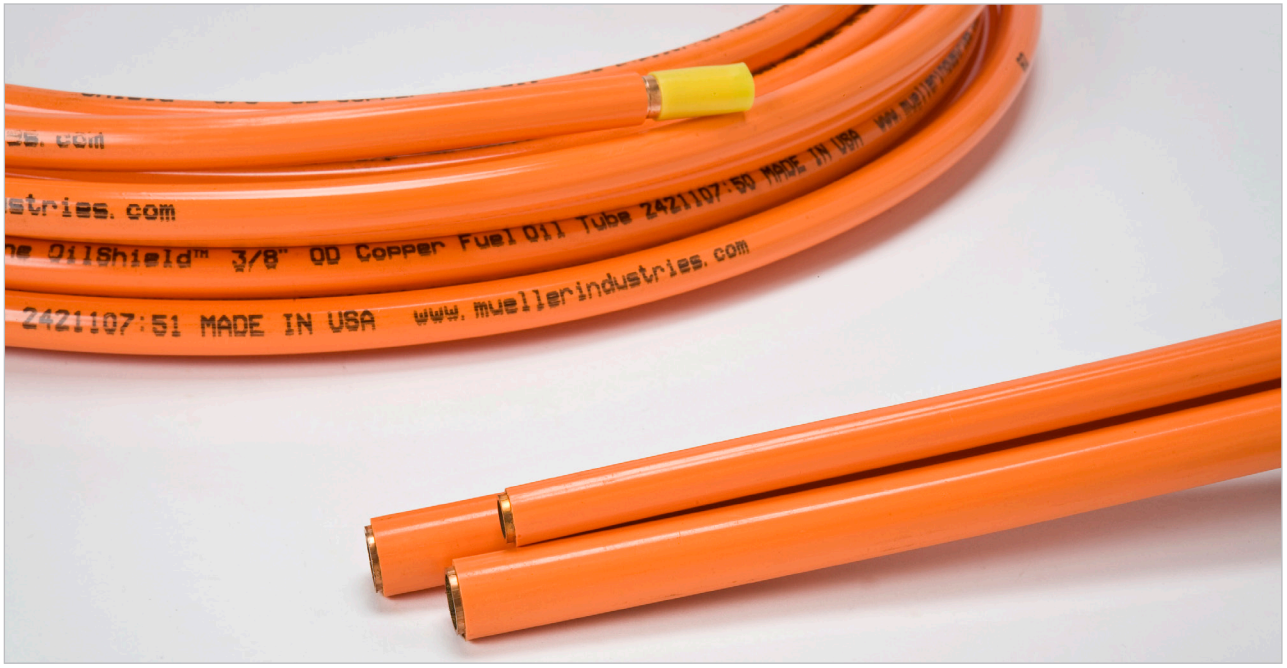
Tube • Fittings • Valves

c UL US LISTED

OilShield®

For use in Fuel Oil Applications

Streamline® OilShield® Coated Copper Tube comes coated with an orange layer of seamless, grooved polyethylene. Commonly used with the distribution of specific flammable liquids, OilShield® 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 common with petrochemical distribution and production. The grooved coating provides an internal channel/path that helps in recognizing and detecting any unforeseen leaks.



Standard Features

- UL Listed to UL971, Nonmetallic Underground Piping for Flammable Liquids
- .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 the USA

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

MADE IN USA

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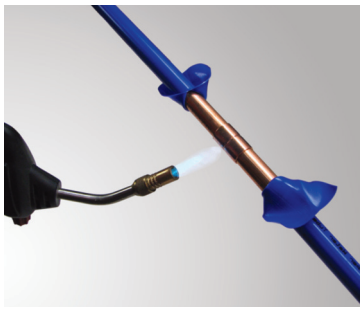
Installation

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

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

3. When the joint is complete and cool, replace the plastic coat and wrap the joint to give continuity of protection

Note: Polyken #930 Tape Coating for Joints & Fittings or comparable alternative is recommended to wrap the joint.

Mueller Industries' OilShield® meets the applicable requirements of the following codes:

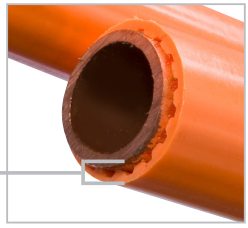
- UL Listed to UL971, Nonmetallic Underground Piping for Flammable Liquids
- NFPA 31 Standard for the Installation of Oil-Burning Equipment
- International Residence Code - 2006*
- CAN/CSA B139*
- Uniform Mechanical Code
- International Fuel Gas Code - 2006*

Copper

- Copper Alloy is seamless UNS C12200 grade.
- Third party certified by Intertek Testing Services

Polyethylene

- Available in orange for fuel oil applications
- Coating is grooved along tube for enhanced leak protection
- Low density polyethylene (LDPE) resin, contains UV inhibitors
- Meets ICC requirements for minimum thickness for 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



Grooved for enhanced leak protection.

Polyethylene-Coated Copper Tube

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

The following are the three elements that cover the language needed for engineering specifications to allow the use of OilShield in petrochemical applications.

Part 1 – General

1.1 Summary

A. OilShield® copper tube provides protection against corrosive environments and abrasive damage through a .025" minimum wall thickness of Polyethylene LDPE resin.

B. OilShield copper tube is continuously marked with size, specification information, manufacturing code and footage every two feet.

C. UL Listed to UL971, Nonmetallic Underground Piping for Flammable Liquids

Part 2 – Materials

2.1 Materials General

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

2.2 OilShield Material

A. Copper Tube

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

B. Polyethylene Coating

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

Part 3 – Installation

3.1 Installation and Usage

A. OilShield tube should be installed and used in accordance with appropriate specifications and codes or based upon Mueller Industries technical recommendations.

Technical Information

DOW DFDA-7059 NT 7

Linear Low Density Polyethylene Resin

DOW DFDA-7059 NT 7 Linear Low Density Polyethylene Resin is an ethylene-butene copolymer which is supplied in pelleted form. It is generally recommended for slot cast thin film applications requiring both clarity and toughness. It is excellent in coextruded, slot cast stretch wrap. This resin is also suitable for use in drip irrigation and hose and tube applications.

Main Characteristics

- High clarity
- High tensile strength
- High elongation
- Good puncture resistance
- Complies with U.S. FDA 21 CFR 177.1520(c) 3.1a. Consult the regulations for complete details.

Slip Additive: None
Antiblock Additive: None

Properties(1)

Typical Physical		Test Method	Values(English (S.I.)
Melt Index, (I_2) at 190°C/2.16 kg, g/10 min		ASTM D 1238	2.0
Density, g/cc		ASTM D 792	0.918
Film(2), 1mil (25 µm)			
Dart Impact(Method A), g Method A		ASTM D 1709	70
Elmendorf Tear (Method B), g	MD CD	ASTM D 1922	50 400
Ultimate Tensile, psi (MPa)	MD CD	ASTM D 882	5,000(34) 3,600(25)
Ultimate Elongation, %	MD CD	ASTM D 882	450 850
Gloss, 45°		ASTM D 2457	92
Haze, %		ASTM D 1003	2.5

Fabrication Conditions For Cast Film:

- Extrudable by conventional slot cast film extrusion equipment with only minor machine modifications necessary for optimum use.
- Melt Temperature: 520°F (270°C)

(1) These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.
(2) Film properties are typical of slot-cast film extruded at 520°F (270°C).

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