

- EBRILLE -
INDUSTRIES
LINE SETS



Made in Italy

Since 1932

The Ebrille background story was chiselled out by passionate men. The perseverance and far-sightedness of this family-run business has been rewarded with important international success. The origin company - established in the early '900 and involved in the installation of thermo hydraulic systems - has been further supported by a foundry devoted to the production of pipes, plates, and lead-siphons.

In 1977 Ebrille Attilio and his son Giovanni decided to aim at the manufacturing of pre-insulated copper pipe.

The entrance in the company of Ettore Ebrille in the late '90 years involved the establishment of Complast Srl, specialized in manufacturing of foamed polyethylene articles, such as: sheaths, plates and packaging profiles.



Monfertek Srl has been established in 2003 for the production of cross linked polyethylene plates for the use in the following fields:

air conditioning, building, automotive, spare time and technical foamed materials, completing the polyethylene insulators range.

The continuous research and innovation of the group during these years and the constant care with the target of the customers' satisfaction make Ebrille a leading

group in its specific competence market.

The ISO 9001:2008 approval relevant to our plants and the certifications of the various products in the different European countries guarantee both quality and total reliability of the involved items.

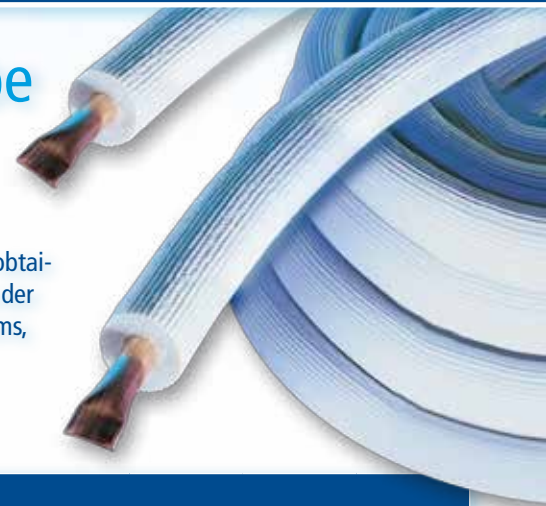
The certainty of a linear and coherent commercial policy assures the operators in the different markets with presence of our brand

Ebrille Industries Group, experience and passion

Ebrilsplit singular insulated copper tube Twinsplit twin insulated copper tube

Copper tube is made according to ASTM B280 and covered with Ebrille's foamed polyethylene, obtained by extrusion using environmentally friendly gases. Cleaned inside and sealed at the ends under a pressure of more than 70 tons, These products are the ideal solution for air conditioning systems, conveyance of refrigerant gases and mini split.

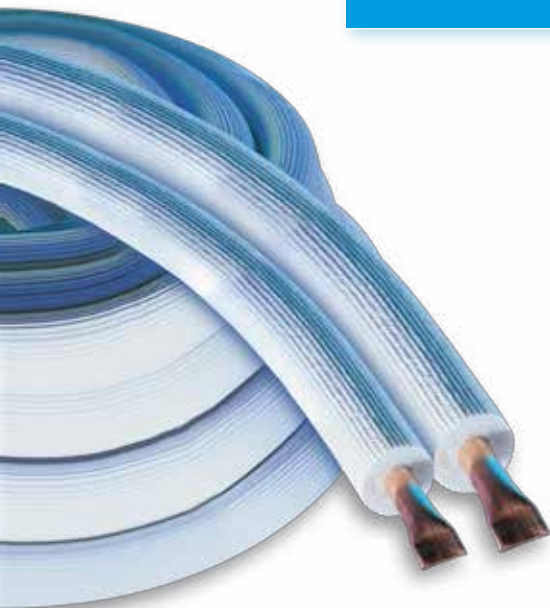
✓ Our products reduce installation time and the tight insulation fit improve R value.



ASTM B280
UL 723
UL 94
ASTM C411

TECHNICAL DATA							
Copper tube OD	inch	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
Copper tube thickness	inch	0,03	0,032	0,032	0,035	0,035	0,045
Main PE foam insulation thickness	inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Thermal conductivity at 75°F	0,0357 W/mk (0,248 Btu - in /h *sq. Ft * °F)						
P = allowable pressure at 200°F (ASME B31)	psi	1125	787	700*	700*	700*	700*
Outer PE skin thickness	µm	200	200	200	200	200	200
Roll lengths	ft	50	50	50	50	50	50
		164	164	164	164	82	82
		15; 25; 35	15; 25; 35	15; 25; 35	15; 25; 35	15; 25; 35	15; 25; 35

* experimental working pressures



Twinsplit

TECHNICAL DATA							
First copper tube OD	inch	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"
Second copper tube OD	inch	3/8"	1/2"	5/8"	1/2"	5/8"	3/4"
First copper tube thickness	inch	0,03	0,03	0,03	0,032	0,032	0,032
Second copper tube thickness	inch	0,032	0,032	0,035	0,032	0,035	0,035
P = allowable pressure at 200°F (ASME B31) first copper tube	psi	1125	1125	1125	787	787	787
P = allowable pressure at 200°F (ASME B31) second copper tube	psi	787	700*	700*	700*	700*	700*
Main PE foam insulation thickness	inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Thermal conductivity at 75°F	0,0357 W/mk (0,248 Btu - in /h *sq. Ft * °F)						
Outer PE skin thickness	µm	200	200	200	200	200	200
Roll lengths	ft	50	50	50	50	50	50
		25	25	25	25	25	25

* experimental working pressures

POLYETHYLENE INSULATION "R" VALUE

r values (h* ft* °f / btu λ. thermal conductivity w/m*k = 0.0357 a 24°c 0.248 btu - in / h * ft 2+°f)

Pipe insulation ID size	Insulation thickness 1/2"	Insulation thickness 3/4"
1/4"	4.1	6.6
3/8"	3.6	5.9
1/2"	3.3	5.4
5/8"	3.1	5.1
3/4"	3.0	4.8
7/8"	3.0	4.6

Coveral singular insulated copper tube Twincoveral twin insulated copper tube

Copper tube is made according to ASTM B280 and covered with Ebrille's foamed polyethylene, obtained by extrusion using environmentally friendly gases. Cleaned inside and sealed at the ends under a pressure of more than 70 tons, These products are the ideal solution for air conditioning systems, conveyance of refrigerant gases and mini split.

- ✓ External surface made in aluminum ANTI-UV
- ✓ Our products reduce installation time and the tight insulation fit improve R value.



ASTM B280
UL 723
UL 94
ASTM C411

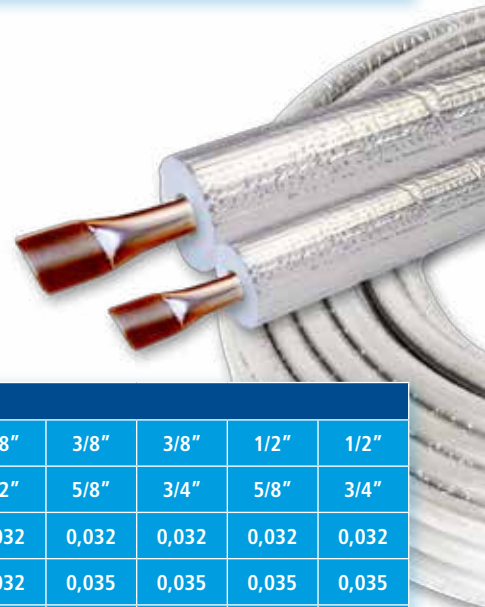
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Main PE foam insulation thickness	inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Thermal conductivity at 75°F	0,0357 W/mk (0,248 Btu - in /h *sq. Ft * °F)						
P = allowable pressure at 200°F (ASME B31)	psi	1125	787	700*	700*	700*	700*
Outer aluminum skin thickness	µm	30	30	30	30	30	30
Roll lengths	ft	50	50	50	50	50	50
		164	164	164	164	82	82

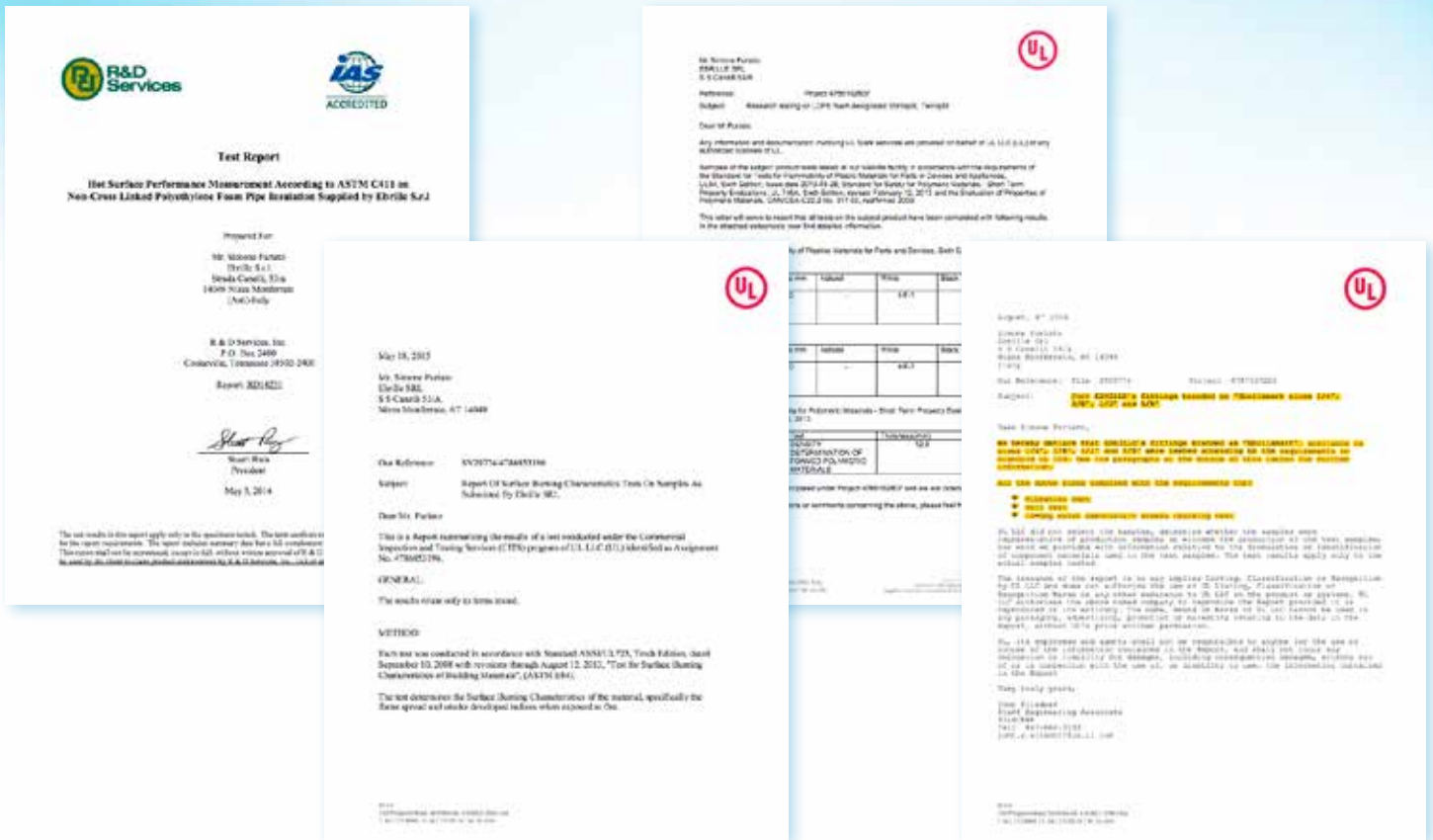
* experimental working pressures

TwinCoveral

TECHNICAL DATA									
First copper tube OD	inch	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"
Second copper tube OD	inch	3/8"	1/2"	5/8"	1/2"	5/8"	3/4"	5/8"	3/4"
First copper tube thickness	inch	0,03	0,03	0,03	0,032	0,032	0,032	0,032	0,032
Second copper tube thickness	inch	0,032	0,032	0,035	0,032	0,035	0,035	0,035	0,035
P = allowable pressure at 200°F (ASME B31) - first copper tube	psi	1125	1125	1125	787	787	787	700	700
P = allowable pressure at 200°F (ASME B31) - second copper tube	psi	787	700*	700*	700*	700*	700*	700*	700*
Main PE foam insulation thickness	inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Thermal conductivity at 75°F	0,0357 W/mk (0,248 Btu - in /h *sq. Ft * °F)								
Outer aluminum skin thickness, µ	µm	30	30	30	30	30	30	30	30
Roll lengths	ft	50	50	50	50	50	50	50	50

* experimental working pressures





American Standards Compliance

Test / Standard	TEST DESCRIPTION	STATUS
UL 723	<p>TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS</p> <p>Edition 10</p> <p>Revision Date 2013/08/12</p>	<p>PASSED - 0/50 (FSI/SDI)</p> <p>See our letter report on www.ebrillusa.com under the "Test Reports" header</p>
UL 94	<p>TEST FOR FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS IN DEVICES AND APPLIANCES</p> <p>Edition 6</p> <p>Issue Date 2013/03/28</p>	<p>PASSED - HF1 rating ACHIEVED</p> <p>See our letter report on www.ebrillusa.com under the "Test Reports" header</p>
ASTM C411	<p>TEST METHOD FOR HOT SURFACE PERFORMANCE OF HIGH TEMPERATURE THERMAL INSULATION</p>	<p>TEST PERFORMED AT 220°F</p> <p>See our letter report on www.ebrillusa.com under the "Test Reports" header</p>
UL 109	<p>TEST FOR TUBE FITTINGS FOR FLAMMABLE AND COMBUSTIBLE FLUIDS, REFRIGERATION SERVICE AND MARINE USE</p>	<p>PASSED</p> <p>See our letter report on www.ebrillusa.com under "test reports" header</p>
Nizza Monferrato, May 20 th 2015		Ebrille s.r.l. - Technical Dpt



Eliminate flaring for fast leak free connections EBRILSMART MAKES INSTALLATION "SMART"

EBRILSMART technical characteristics

- ✓ Working temperature: -45°C to 150°C
- ✓ Maximum operating pressure: 45 bar
- ✓ Suitable for all refrigerants HCFC, HFC, HC
- ✓ Triple metallic seal
- ✓ Compatible with traditional 45° flare fittings
- ✓ It is not required the use of a torque wrench for the installation
- ✓ To be used exclusively on R220 annealed copper tubes and OH111 aluminium tubes

EBRILSMART certification

- ✓ Tested according to the requirements in Standard UL 109
- ✓ Conformity with European Directives (PED, RoHS and REACH)
- ✓ Superior performance than the traditional 45° flare fittings



LABORATORY TESTS



Leakage test EN 1779.B6

Test which calculates the annual loss of refrigerant, the recommended threshold is 1 g/year; it was measured a loss of < 50 mg/year



Burst test EN 378-2

Test in which is evaluated the pressure resistance of the fittings, fittings were tested and remained intact at a maximum pressure of 200 bar

Instructions to perform a proper installation of EBRILSMART



Insert the tube, previously cut and deburred, into the nut and the insert the sleeve. Bevel of sleeve toward nut. Lubricate the inner surface of the nut.



Tutorial on
YouTube



Apply pressure to hold tube against male flare body while hand tightening. Mark pipe-nut location then follow wrench tightening directions. If necessary maintain pressure on tube until nut tightening prevents tube drift.



Mark the starting point and make a complete turn and a half with the aid of a common wrench.



In the event that the nut needs to be unscrewed for inspection the following installation requires that half a turn is made via a common wrench (after manual screwing is done).



COVERAL INSULATION



Polyethylene sheath with pre-cut aluminum film

TECHNICAL DATA OF COVERAL INSULATION					
Insulation foamed polyethylene with outer aluminum film					
Insulation density, kg/m ³			30 ± 3		
Thermal conductivity at 24°C, Btu - in / h * ft ² * °F			0.248		
Steam factor, μ			11,000		
Length of bars, ft			6		
Diameter (inch)	Thickness (inch)	Tolerances on the inside diameter (inch)	Tolerances On the thickness (inch)	R value at 24°C	Packaging (bars / box)
1/4"	1/2"	0..+0.08	± 0.04	4.1	83
3/8"	1/2"			3.6	62
1/2"	1/2"			3.3	56
5/8"	1/2"			3.1	47
3/4"	1/2"			3.0	41
7/8"	1/2"			3.0	38
1	1/2"			2.8	35
1 - 1/8"	1/2"			2.7	30
Box sizes					
2000 x 400 x 300mm					