

PRODUCT FEATURES

Copper tube underneath: all the copper tubes used for EBRILSPLIT and TWINSPLIT line-sets are manufactured in compliance with the American Standard ASTM B 280 "Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service". Tubes are suitable to the refrigerant gases R407C , R410 and R32

Copper tube composition : Copper C12200 Cu-DHP (phosphorous deoxidized, high residual phosphorous) ; chemical composition: Cu ,minimum percent composition 99,9 % maximum Phosphorus content 0,015-0,040%

Product identification: all the pipes report the following key information: the ACR symbol, the outer diameter of the tubing (OD), the country of origin (ITALY) , year and quarter of production, in order to get a comprehensive production traceability.

INSULATION

The polyethylene foam made insulation manufactured by EBRILLE is obtained by abiding by the guidelines reported across the standard **ASTM C1427-13** "Standard Specification for Extruded Preformed Flexible Cellular Polyolefin Thermal Insulation in Sheet and Tubular Form" and tested according to the standard **ASTM C411** " Test Method for Hot-Surface Performance of High Temperature Thermal Insulation"

The insulation used for EBRILLE's line-sets stands out thanks to the following benefits:

It is fully recyclable since it employs an innovative proprietary formula made out of non-cross-linked polyethylene which bestows improved thermal performances compared to the traditional products currently provided within the market



The insulation gets manufactured by means of blowing agents which are not harmful to the ozone layer, such as isobutane



It is safe since it is tested in compliance with the reference standards ruling the fire prevention, namely ASTM E 84- (UL 723) and UL 94.

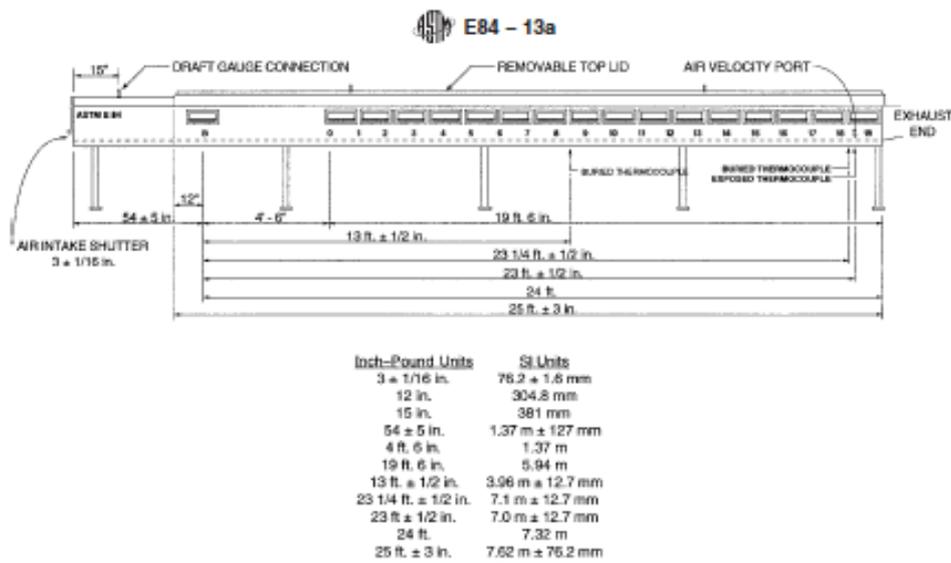
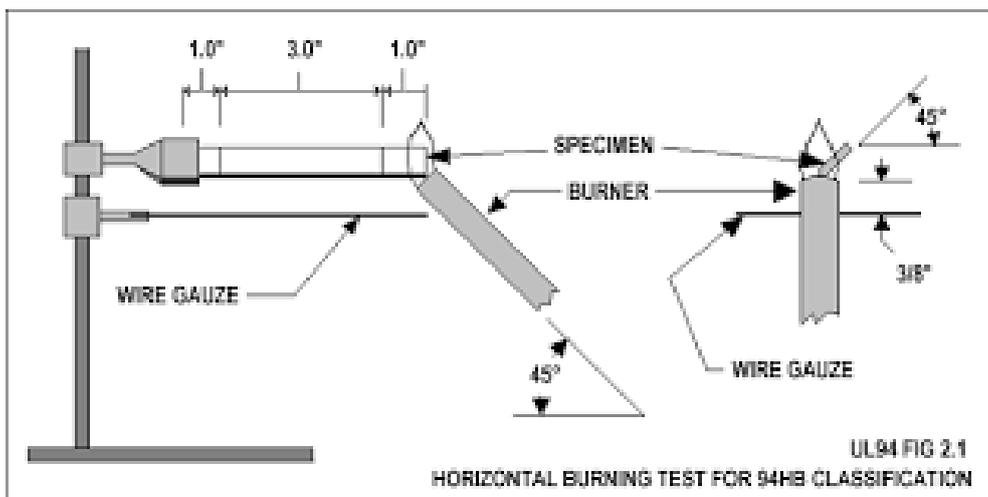
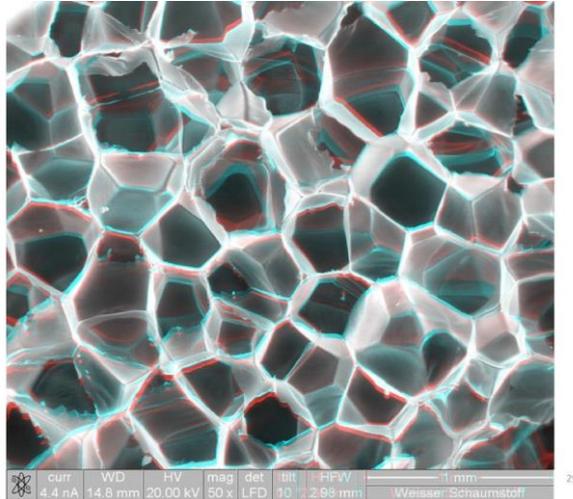


FIG. 1 Test Furnace, Showing Some Critical Dimensions (Not a Construction Drawing)



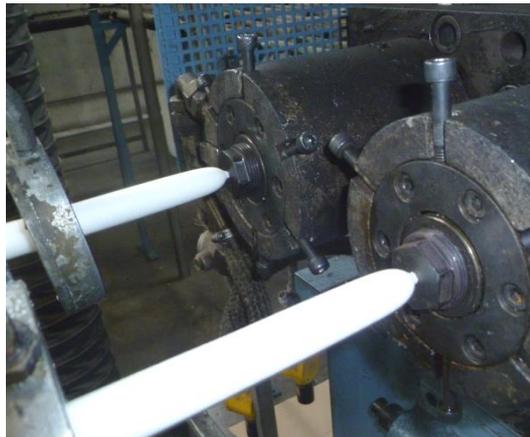
Schematic representation of the equipment related to the testing methods

The manufacturing process involves using a polyolefin based binary polymer blend (OBC), through a technological process with a low environmental impact, which ensures an outstanding control over the properties of the product, such as density, geometrical sizes and cell homogeneity



Micrography of the cross-section of the closed cell structure of the insulation

The production of the insulation occurs in tubular shape in order to ensure the best insulating conditions of the tubes.



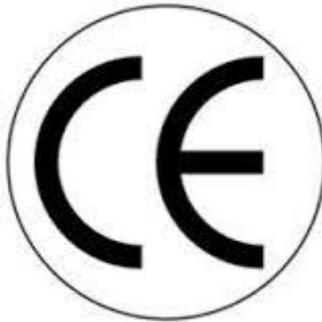
Representation of the extrusion die for manufacturing tubular profiles

Every copper tube is pre-insulated via an insulating sheath earmarked to every specific tubing, in order for ensuring a flawless adherence onto the metal surface.



Several tubular profiles earmarked to coating copper tubes

Furthermore the insulation has achieved the CE mark for the European market in compliance with the European standard **EN 14313** Thermal insulation products for building equipment and industrial installations. Factory made polyethylene foam (PEF) products. Specification" which rules the requirements of polyethylene foam products for thermal insulation, plus it encompasses test procedures, evaluation of conformity and CE marking of the product



KEY FEATURES OF THE INSULATION

Property	Unit of measure	Reference value
Material	LDPE Foam	Non cross-linked PE foam
Density	Kgs/cbm	30±3
Available wall thicknesses EN 13467:2004	inch	3/8"-1/2"-3/4"
Fire behavior tested in accordance to the standard ASTM E84 – UL723	FSI (flame Spread index)- SDI (Smoke Development Index)	Class A
Fire behavior tested in accordance to the standard UL 94	-	HF-1 Measures performed on thickness 1/2")
Thermal conductivity 0°C 10°C 20°C 30°C 40°C (average temperatures) EN 8499:1999	mW/mk	0.0335 0.0344 0.0353 0.0361 0.0376 (measures performed on average thickness 3/8")
Resistance to water steam diffusion EN 13469:2004	μ	12938 (minimum thickness 0.16 in.)
Water absorption EN13472:2010	(W _P) Kg/m ²	0.30