

Material Data Sheet Rev 1.18 (02/22/2018)



Product name: GelBlack

Copper: the copper tube is manufactured according ASTM B280 and meets the standard of ASME B35.

Tube is manufactured in accordance with ASTM B280 and ANSI B9.1, refrigeration industry standards.

Insulation: closed cells expanded polyethylene + low density polyethylene film

Product Codes of the insulation : polyolefin products

Chemical family: polyolefin thermoplastics

Composition information on ingredients (Insulation)

Polyethylene	CAS 9002-88-4	85% - 100%
Other proprietary additives	N/A	0 - 15%

HAZARDOUS INGREDIENT		EXPOSURE LIMITS Wt %
Isobutane	CAS 0075-28-5	800 ppm TWA (ACGIH)

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Insulation

Product is made according to ASTM C 1427-07, type I (tubular), grade I (insulation material use for use on typical commercial system non-cross-linked).

Low-density polyethylene foam:

- closed cells foam, CFC and HCFC gas free

Water vapor permeability: according to ASTM E96-00

- $\rho = 4 \times 10^{-5}$ [mg/(h*m*Pa)]

Working temperature: according to ASTM C 1427-07 , type I (tubular) , grade I from - 94 F to 250 F

Wall thickness available: 3/8", 1/2", 3/4"

Surface burning characteristics for materials used in PLENUMS **UL TESTED:**
according UL 723, ASTM E84 (25/50),

- flame and Spread Index less than 25 and
- Smoke Development Index less than 50.

UV RESISTANCE

Gelcopper has been tested with an **Accelerated Weathering Test Machine**
The Test confirmed a good resistance to UV



Thermal conductivity according ASTM C 335-95 .

- "k" at 75 °F , mean temperature, = 0.252369 (Btu in.)/(sq.ft. °F h) for ½" ins.

R Value

Insulation					
nom. Ins. thick.	ins thickness	OD	ID	k	R
1/2	0.509	1.318	0.300	0.25	4
1/2	0.520	1.440	0.400	0.25	4
1/2	0.549	1.600	0.503	0.25	4
1/2	0.585	1.820	0.650	0.25	4
1/2	0.615	2.000	0.770	0.25	4
1/2	0.675	2.250	0.900	0.25	4

Insulation					
nom. Insul. thick.	insul thickness	OD	ID	k	R
3/4	0.693	1.685	0.300	0.26	6
3/4	0.832	2.064	0.400	0.26	6
3/4	0.837	2.177	0.503	0.26	6
3/4	0.853	2.356	0.650	0.26	6
3/4	0.818	2.405	0.770	0.26	5
3/4	0.771	2.442	0.900	0.26	5