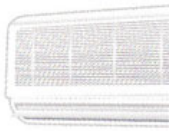
# INSULATION FOAM TUBE

Greenland's Foam Tube is a quality insulation tube of high-grade expanded polyethylene material with a closed cell structure obtained through direct extrusion. The process does not involve any (H) CFCs and is therefore an environmentally friendly product.

The Foam Tube is highly flexible and light weight in nature. Because of its mechanical properties and characteristics, it is highly suitable for chilled and hot water pipeline installations. It is also excellent in preventing heat loss from hot water pipelines and in preventing heat gain and condensation in chilled water and refrigerant pipelines. Greenland's insulation tubes are highly cost effective and provide an excellent solution especially for central air-conditioning ductwork insulations.

## Characteristics and Advantages

- Low Thermal Conductivity makes it a superb insulation material for cooling or heating systems.
- An Operating Temperature that ranges between -40°C to +80°C.
- Lowest water absorption and vapour transmission. The dense cell structure provides an excellent vapour barrier for preventing condensation or frost formation on chilled water pipelines or refrigerant lines. It also retards heat loss for hot water pipelines and heating systems.
- High resistance to most chemicals and which makes it ideal for protecting pipelines from corrosion by external atmostpheric factors.
- High flexibility and smooth surface of the Insulation Foam Tube enables quick, easy installations and a neat finished appearance.
- CFC free
- Helps retard vibration and resonance of the pipelines during operation



## Installation and Application Recommendations

### 1. Pre-Assembling Line

Installing the Insulation Foam Tube on the pipeline is fast and easy. To install, just insert and slip the Insulation Foam Tube over the copper or iron pipe.

The Insulation Foam Tube can be easily cut with a cutting blade and knife. To join the Insulation Foam Tubes, apply a coat of adhesive glue to both butt ends. Allow the adhesive glue to set until non-tacky to the touch and then press the joints firmly together.

For a perfect finish, we recommend using PVC adhesive tapes or aluminium tapes on joints and seams.

### 2. For existing pipelines

To install the Insulation Foam Tube on existing pipelines, just slit the tube lengthwise on one side and snap over the copper or iron pipe. Then seal the slit surface and butt joints with adhesive glue.

Wall thickness of Insulation Tubes recommended to control condensation in pipe insulation of cooling lines:

In general, selection of the types of wall thickness of the insulation tubes largely depend on two main factors: the external weather temperature and atmospheric humidity conditions where the pipelines are installed.

*i. Insulation under frequent low humidity and normal weather conditions (Weather Temperature of < 28°C)*

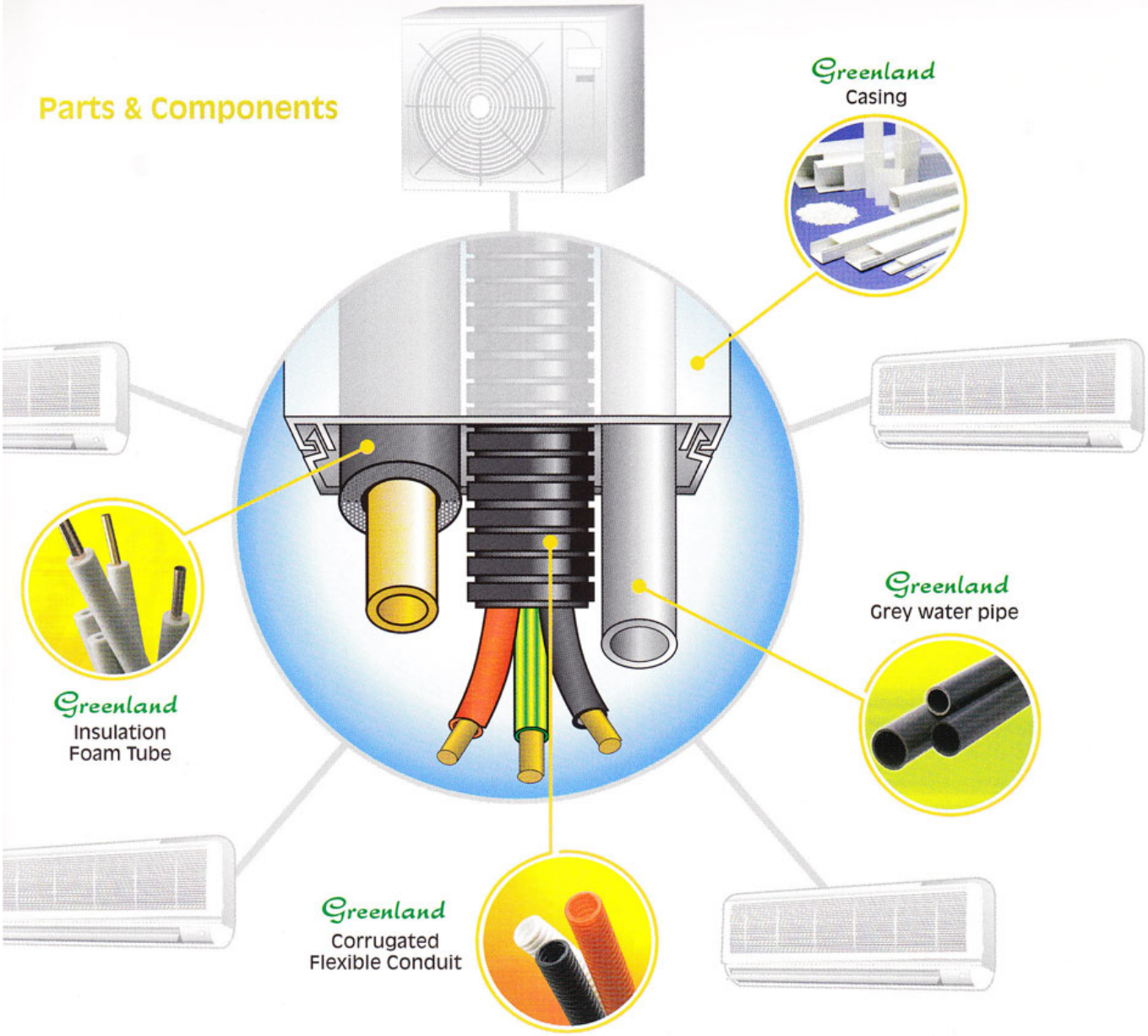
| To maintain pipeline temperature | Recommended wall thickness |
|---|---|
| > 5°C | 10 mm ; 13 mm |
| < 5°C | 19 mm ; 25 mm |

*ii. Insulation under frequent high humidity and high external weather conditions (Weather Temperature of > 28°C)*

| To maintain pipeline temperature | Recommended wall thickness |
|---|---|
| > 5°C | 13 mm ; 19 mm |
| < 5°C | 19 mm ; 25 mm |

**Insulation Foam Tube comes in different sizes to accomodate the pipelines.**

## Parts & Components




## Physical Properties

| Average Physical Properties | Rating |
|---|---|
| Density | 0.15 – 0.2 g/cm$^3$ |
| Cellular Structure | Fine, Close |
| Colour | Silvery Grey |
| Temperature Range | -40°C to + 80°C |
| Permeability | ± 0.27.10 $^{12}$m/s |
| Water absorption in volume % at 23°C | After 7 days approx. 1.5% / 28 days approx. 2.0% |
| Water Vapour Diffusion resistance | Good |
| Ozone resistance (ASTM D 1171) | Excellent |
| Odour | Neutral |
| Chemical resistance (ASTM 543-56T) | Excellent |
| Ageing | Not Evident at 100°C |
| Flexibility | Good to – 40°C |
| Thermal Stability | Shrinkage < 1% |
| Toxicity in fire | None, virtually |
| Smoke Emission | Upon complete combustion: 99% cO2 en h20 |
| Fire-rating | Meets the fire classification requirement of BS 476: Part 7 |

## Insulation tube Sizes

| I.D. Size (IPS) | I.D. (mm) | 3/8" Wall (10 mm) | 1/2" Wall (13 mm) | 3/4" Wall (19 mm) | 1" Wall (25 mm) |
|---|---|---|---|---|---|
| 1/4" | 6 | 150 (1006) | 100 (1306) | 50 (1906) | - |
| 3/8" | 10 | 110 (1010) | 80 (1310) | 40 (1910) | 30 (2510) |
| 1/2" (1/4 IPS) | 13 | 90 (1013) | 70 (1313) | 35 (1913) | 27 (2513) |
| 5/8" (3/8" IPS) | 16 | 80 (1016) | 60 (1316) | 30 (1916) | 25 (2516) |
| 3/4" | 19 | 70 (1019) | 50 (1319) | 30 (1919) | 22 (2519) |
| 7/8" (1/2" IPS) | 22 | 60 (1022) | 45 (1322) | 28 (1922) | 20 (2522) |
| 1" (3/4" IPS) | 25 | 50 (1025) | 40 (1325) | 25 (1925) | 20 (2525) |
| 1 1/8" | 28 | 46 (1028) | 35 (1328) | 25 (1928) | 18 (2528) |
| 1 1/4" | 32 | 40 (1032) | 30 (1332) | 20 (1932) | 16 (2532) |
| 1 3/8" (1" IPS) | 35 | 35 (1035) | 28 (1335) | 20 (1935) | 15 (2535) |
| 1 1/2" | 38 | 32 (1038) | 25 (1338) | 18 (1938) | 12 (2538) |
| 1 5/8" (1 1/4" IPS) | 42 | 28 (1042) | 25 (1342) | 16 (1942) | 12 (2542) |
| 1 7/8" (1 1/2" IPS) | 48 | 25 (1048) | 20 (1348) | 15 (1948) | 10 (2548) |
| 2" | 51 | 22 (1051) | 20 (1351) | 12 (1951) | 9 (2551) |

**Tube Length:** 1.83 metre length (6 feet)

**Standard Carton Size:** 1850 mm x 380 mm x 305 mm

## Other Products

### Foamrods

- Foamrods are round expanded polyethylene profiles that are available in various diameters used to fill up expansion joints.
- Diameters available from 6mm to 50mm
- The excellent material properties will allow you to save on sealant used to close the expansion joints
- Foamrods are highly durable and have long lasting flexibility

*Our Quality, Your Satisfaction*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