

T-Tubes™ are an advanced insulation system specifically developed for stainless steel process lines in clean environments. They require no jacketing and have a temperature range of -50°C to 155°C (-58°F to 311°F). With a wall thickness of only 1/4" they save space and allow for insulating areas that cannot be covered using existing methods. Installation is easy and fast with custom molded fittings and an overlapping self-adhering tape. T-Tubes possess excellent moisture, chemical and UV resistance along with low smoke, flame, and toxicity properties. Their fine close-cell nature allows for cutting and installing in clean environments without the use of bags or hoods.

Technical Data:

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| Material | ZOTEK F® Kynar® PVDF based foam |
| Service Temperature | -50°C to 155°C (-58°F to 311°F) |
| Thermal Conductivity ASTM C-518 | k=.22 @ 72°F (k² 0.0317 a/m.k) |
| Flammability ASTM E-84 | Flame 5 / Smoke 5 |
| Mold Growth ASTM G21-96 | No sign after 28 days |
| Fungus Growth DO160D, Sec 13, Cat F | No sign after 28 days |
| Outgassing (Semiconductor Standards) | 29.1µg/g (limit 1000µg/g) |
| Permeance | 0.02 grains/hr |
| Cell Size | 0.17mm |
| Density ISO 845 | 2.2pcf (36 kg/m³) |
| Compression ISO 7214 | 15.8psi @ 25% and 26.1psi @ 50% 109kPa @ 25% and 180 kPa @ 50% |
| Tensile Strength ISO 1798 | 85psi (586 kPa) |
| Elongation ISO 1798 | 66% |
| Tear Strength ISO 8067 | 5 lbf/in (876 N/m) |
| Factory Mutual 4924 Pipe Chase Flammability Standard | Approved |
| Factory Mutual 4910 Cleanroom Materials Test Protocol | Compliant / Listed |

Application:

Straight T-Tubes come with an overlapping, self-sealing pressure sensitive adhesive tape, which is also available in rolls. Tape is used on fittings as well. For chill lines and areas where an airtight seal is required, a high temperature silicone adhesive/sealant can be used for seams, ends, and butt-joining.

T-Tubes do not require jacketing as they do not permeate, or absorb moisture or cleaning agents.

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