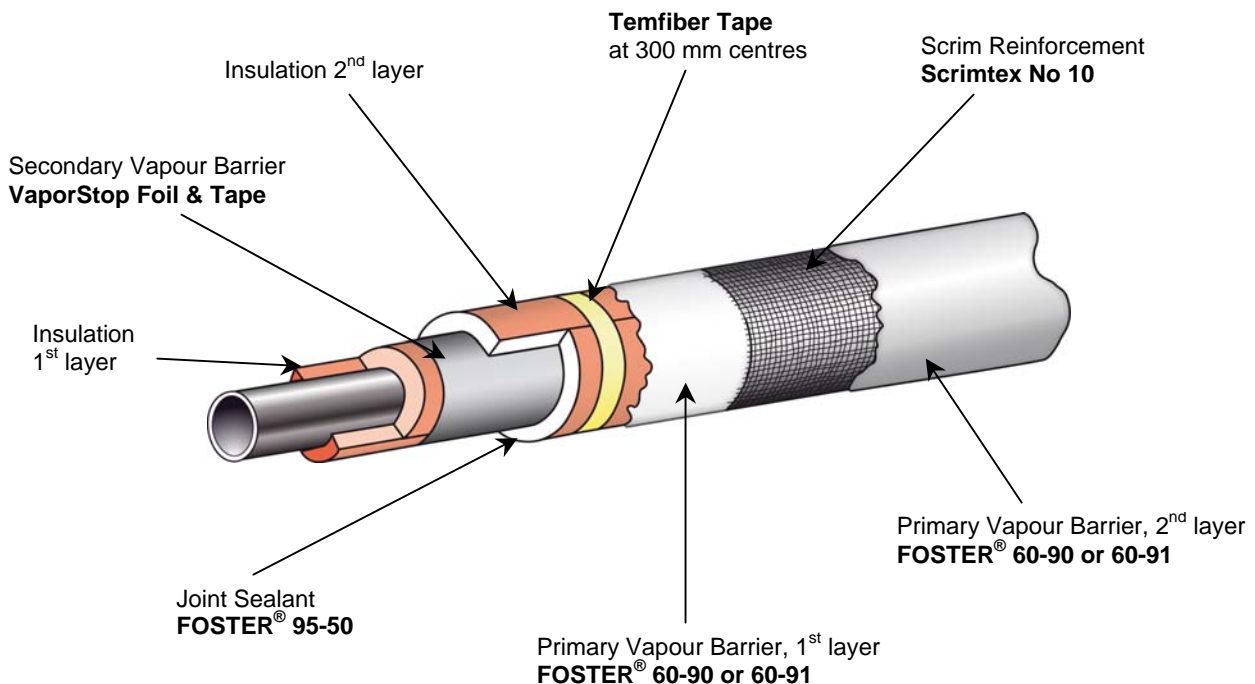




Cold/ cryogenic insulation



N.B. for more FOSTER® refer to the selection chart on reverse.

The Problem

With cold insulation it is imperative to prevent moisture from entering the insulation system, as this will reduce the system's performance and in the event of freezing, could even disrupt the insulation. The greater the temperature difference between ambient and process temperature, the greater the "pull" of moisture to the pipe/vessel surface, and consequently, the greater the need for an effective and durable vapour barrier system.

The Solution

FOSTER® Products Corp, world market leader in the protection of thermal insulation for more than 50 years, provides total solutions to prevent the ingress of moisture into cold insulation systems operating at temperatures down to -196°C . FOSTER® vapour barriers offer total protection without any seams, overlaps or joints to cause short- or long-term failures. This is especially important on bends, T-junctions, vessels, etc.

The FOSTER System

Sealant – all circumferential and longitudinal joints are sealed with a Foster® sealant or adhesive. In the case of multiple insulation layers, usually only the outer layers are sealed.

Vapour Barrier- Over the outer insulation surface a FOSTER® vapour barrier mastic is applied in two layers, with a reinforcement fabric wrapped in the first layer prior to application of the second layer. Often different colours are used to ensure proper coverage. This FOSTER® protective covering is referred to as the primary vapour barrier. In the case of multiple insulation layers, the inner insulation layer(s) is/ are usually covered with a secondary vapour barrier i.e. VaporStop Foil (with VaporStop Tape to cover the joints/ overlaps).

Insulation Endings/ Stops- In cryogenic insulation systems all insulation endings e.g. flanges and valves, are protected with Foster® 90-66 Cryogenic coating/ adhesive/ sealant.

Metal Jacketing- where metal jacketing is used over the insulation, the overlaps are sealed with a Foster® metal sealant.

Technical Support

This selection guide covers the best practice for most situations. If you need additional information please contact our technical department. Based on our engineered solutions we can advise on specific details, application and engineering.



COLD INSULATION – INDOOR/ OUTDOOR

Foster code ⁽³⁾	Product Name	Solvent based	Solvent free low voc	Service temp. °C	Product Description
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JOINT SEALANT

30-45	Foamseal®		✓	-73 to + 149	Permanently flexible vapour-barrier sealant and bedding-compound for joints of cellular glass, PIR- and PUR- foam insulations.
81-84	Adhesive/Sealant		✓	-70 to + 150	2-part sealant/adhesive for bonding thermal insulation to itself (including polystyrene foam), to metal, cement and wood.
95-50	Flextra Sealant	✓		Cellular glass -129 to +71 PU foam -157 to + 71	Permanently flexible vapour-barrier sealant and bedding-compound for joints of cellular glass, PIR- and PUR- foam insulations.

VAPOUR BARRIER

30-90 30-91	Vapour Safe® Coating White/ grey		✓	-29 to + 82	Primary vapour barrier. The best water-based vapour barrier on the market, suitable for all insulants, including polystyrene and elastomeric foams.
60-75 60-78	Fire Resistant Mastic Aluminium/ blue	✓		-40 to + 80	Primary vapour barrier. Flexible F.R. and UV-resistant vapour-barrier coating with a bright reflective aluminium or blue finish.
60-90 60-91	Monolar® Mastic White/ grey	✓		-46 to + 104	Primary vapour barrier. Flexible F.R. and UV-resistant vapour-barrier coating, containing Hypalon1. Primary vapour barrier.
Tem ⁽³⁾	Mylar VaporStop (Mylar1) foil	-	-		Secondary vapour barrier. Multi-layer foil of 12/25/12 micron Pet/ Alu/ Pet foil. Joints covered with VaporStop Tape.

SCRIM REINFORCEMENT

Tem ⁽³⁾	Scrimtex (N 10)	-	-	+250	10 x 10 fibreglass reinforcement scrim with excellent dimensional stability.
42-24	Mast-A-Fab	-	-	+121	9 x 8 polyester scrim with a PVA finish.

METAL SEALANT

95-44	Elastolar Sealant	✓		-40 to +121 ⁽²⁾	Fire resistant, aluminium coloured, flexible vapour barrier for sealing laps of aluminium.
96-01	Extruded Sealant tape		✓	-51 to + 71	Non-hardening butyl gap sealant with excellent adhesion and weathering properties for use on plastic foam and cellular glass insulations, also on sheet metal.

KEY

Recommended Foster product	Recommended non Foster product	Remarks (1) Trademark of Dupont de Nemours (2) Service temperature dependant on substrate and application, please refer to TDS (3) 'Tem' = a Temati Product (non-FOSTER)
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Other options :	Vapour barriers Foster 60-38 / 60-39 Foster 60-25 Foster 65-05 / 65-06	Metal sealants Kiiltoflex-K MS Polymer Temseal UAF Silicone Sealant	
Other applications :	Heat transfer Foster 30-60 Heat transfer cement	Anti stress-corrosion Foster 57-73 stainless steel coating	Anti Abrasion Foster 30-16 WB coating for cellular glass
Cryogenic products :	Vaporstops/ Insulation endings Foster 90-66	Bedding adhesive for pipe supports Foster 82-77, 81-84	