Claims

1. A composite tubing configured for use as an insulation product, wherein said composite tubing consists of two layers:

   (a) a foam insulation layer, wherein the foam insulation layer is an elastomeric foam insulation layer having a closed-cell structure comprising a combination of polyvinylchloride and acrylonitrile-butadiene rubber (PVC/NBR) and configured to fit directly over the surface of a round pipe; and

   (b) a coating layer bonded to and seamlessly covering an outer surface of the foam insulation layer, wherein the coating layer comprises a thermoplastic elastomer comprising ethylene propylene diene monomer (EPDM) and is bonded to the outer surface of the foam insulation layer in the absence of an adhesive, wherein the composite tubing is configured to fit a round pipe.

2. The composite tubing of claim 1, wherein the foam insulation layer has a density of between about 3 and about 6 pounds per cubic foot (lb/ft^3).

3. The composite tubing of claim 1, wherein the coating layer further comprises a flame retardant and/or one or more additional additives.

4. The composite tubing of claim 1, wherein the tubing has a wall thickness of between about 0.5 inches and about 1 inch.

5. The composite tubing of claim 1, wherein the tubing is a straight tubing having a length of between about three feet and about six feet or a continuous coil tubing having a length of up to about 1,000 feet and/or wherein the tubing has an inner diameter (ID) ranging from about 0.25 inches to about 6.0 inches.

6. The composite tubing of claim 1, wherein the EPDM is a UV-resistant EPDM.

7. A pipe installation, consisting of:

   (a) a round pipe; and

   (b) a composite tubing encompassing an outer surface of the pipe, wherein said composite tubing consists of two layers: (i) a foam insulation layer, wherein the foam insulation layer is an elastomeric foam insulation layer having a closed-cell structure comprising PVC/NBR and configured to fit directly over the surface of the round pipe, and (ii) a coating layer

comprising a thermoplastic elastomer comprising ethylene propylene diene monomer (EPDM) bonded to and seamlessly covering an outer surface of the foam insulation layer, wherein said insulation product is free of an adhesive to bond the coating layer to the outer surface of the foam insulation layer.

8. The pipe installation of claim 7, wherein the coating layer further comprises a flame retardant and/or one or more additional additives.

9. The pipe installation of claim 7, wherein the composite tubing has a thickness of between about 0.5 inches and about 1 inch.

10. The pipe installation of claim 7, wherein the round pipe is a round-shaped metal pipe, further optionally wherein the round-shaped metal pipe has an outer diameter of about 4.125 inches or less.

11. The pipe installation of claim 7, wherein the installation is at an outdoor location and/or where there is heat exposure, optionally wherein the installation is part of a heat pump or a solar hot water heating unit.

12. A method of making an insulation product, the method consisting of:

(a) providing a closed-cell foam tube, wherein the closed-cell foam tube is a closed-cell elastomeric foam tube comprising PVC/NBR and configured to fit directly over the surface of a round pipe; and

(b) extruding a polymeric coating in an encapsulating manner over the closed-cell foam tube to seamlessly cover the outer surface of the foam tube, wherein the extruding is performed at a temperature to provide a bond between the polymeric coating and the foam surface and wherein the polymeric coating comprises a thermoplastic elastomer comprising ethylene propylene diene monomer (EPDM), and wherein the bond is an adhesive-free bond.

13. The method of claim 12, wherein the closed-cell foam tube is prepared via extrusion and vulcanization.

14. The method of claim 12, wherein the method comprises an in-line process with manufacture of the closed-cell foam tube.