

K-Flex Compliance with Standard Specification ASTM C 534

ASTM C 534 Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form

ASTM C 534 is the most widely specified standard for flexible, closed cell elastomeric insulation material. The standard was developed specifically for elastomeric closed cell foam materials. The standard details test methods and requirements for the properties that affect insulation performance. **K-FLEX USA** elastomeric-based insulation products exceed the requirements specified in **ASTM C 534**.

ASTM C 534 defines the properties of 3 grades and 2 types of elastomeric insulation.

The 3 grades are defined as follows:

Grade 1 – Standard (temperature range -297° F to 220° F)

Grade 2 – High temperature - 350° F

Grade 3 – Contains **no halogens*** (such as Chlorine, Fluorine, Bromine, etc)

*While the standard states “non-halogen / no halogens”, ALL elastomeric insulation materials contain some amount of halogens when tested in accordance with ASTM C692. Halogen / leachable chloride levels vary by manufacturer. The ASTM task group responsible for this standard is working to revise the definition of Grade 3 elastomeric materials.

The types are:

Type 1 – tubular

Type 2 – sheet / roll

Each grade and type has specific properties. To ensure the correct product is used, a complete call out should be used (e.g. Type 1, Grade 1 = standard pre-formed pipe insulation).

The critical material properties included in **ASTM C 534** are thermal conductivity (k-factor), water vapor transmission (wvt), water absorption, flexibility, and dimensional stability. The standard provides a minimum baseline of requirements and a set of test methods for determining and comparing these common properties. For a more detailed description of these and other physical properties associated with **K-FLEX USA** insulation products, refer to *Technical Bulletin TS2, “General Description of Key Physical Properties”*.

About ASTM

ASTM, the American Society for Testing and Materials, is a non-profit organization, comprised of users, general interest groups, and manufacturers, established for the purpose of setting minimum requirements for products. Standards are developed on a consensus basis, which means that all parties are given equal status in the standard development process. All standards are reviewed every five years. ASTM C16 (Thermal Insulation Committee) is the main committee assigned to insulation products. ASTM C16.22 is the subcommittee assigned to “organic” and “non-homogeneous” insulation products. **K-FLEX USA** insulation products are included in this category.

