



## Thermoplastic Single Ply and Multi-Ply Roofing Systems

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### **FLEX FB PLUS ELVALOY® KEE ROOF SYSTEM** **(76" WIDE, FLEECE BACKED, REINFORCED, THERMOPLASTIC ROOF MEMBRANE)**

#### **PRODUCT DESCRIPTION**

The Flex FB Plus Elvaloy® KEE Roofing Membrane is a high performance thermoplastic membrane designed for adhered, mechanically attached or ballasted roofing applications. The Flex FB Plus is produced with DuPont Elvaloy® KEE and is available in thickness of 45 mil, 60 mil and 80 mil of polyester reinforced membrane plus a 4 oz. or 6 oz. polyester fleece backing. The Flex FB Plus Elvaloy® KEE Roofing Membrane is an effective choice for new or re-roofing installations as the fleece backing allows the membrane to be installed directly over most substrates with hot steep asphalt or Flex Substrate Adhesive.

#### **FEATURES AND BENEFITS**

The Flex FB Plus Elvaloy® KEE Roofing Membrane may be installed fully adhered to a wide range of substrates including structural or lightweight concrete decks and various types of insulation. The Flex FB Plus Elvaloy® KEE Roofing Membrane has a high degree of resistance to exposure from harsh chemicals and extreme environments. The Elvaloy® KEE ingredient increases the ability of the membrane to remain flexible in temperatures well below freezing. The Flex FB Plus Elvaloy® KEE Roofing Membrane is ideal for applications where standard roofing membranes do not perform well such as heavy industrial sites, airports, and food service facilities. The hot air welded seams allow the membrane to be installed in extreme low slope conditions as ponding water has no effect on the membrane. The wider sheet reduces installation cost and increases production.

#### **INSTALLATION**

The Flex FB Plus Elvaloy® KEE Roofing Membrane may be installed adhered with either hot steep asphalt or Flex Substrate Adhesive which is a cold process water based asphalt emulsion adhesive. The membrane may be installed directly over lightweight or structural concrete as well as a wide variety of insulations. All seams of the Flex FB Plus Elvaloy® KEE Roofing Membrane are sealed by hot air welding recognized as the strongest seam in the roofing industry. Flex has a variety of cold process roofing component configurations that allow for fast and efficient installation in areas that are restricted to fumes or flames such as hospitals, schools, and heavily congested city centers or hard to reach areas.

#### **APPROVALS**

The Flex FB Plus Elvaloy® KEE Roofing Membrane exceeds the requirements of ASTM D4434 standard for thermoplastic sheet roofing. The Flex FB Plus has been thoroughly tested by Factory Mutual and has numerous applications meeting Class 1-90. The Flex FB Plus has been approved for Class A fire rating by Underwriters Laboratories. Due to the white heat reflective surface, Flex

thermoplastic membranes are approved by the EPA's Energy Star® Program and the Cool Roof Rating Council (CRRC).

**PHYSICAL PROPERTIES**

| <b><u>Characteristics</u></b> | <b><u>Test Method</u></b>  | <b><u>Physical Properties</u></b>                        |
|-------------------------------|----------------------------|--|
| Color                         |                            | White  |
| Thickness                     | ASTM D751                  | .045", .060", .080" nominal                              |
| Roll Size                     |                            | 45 mil: 76"x 90'<br>60 mil: 76"x 90'<br>80 mil: 76"x 75' |
| Breaking Strength             | ASTM D751                  | 350 lbs. x 325 lbs.                                      |
| Seam Strength                 | ASTM D638                  | 90%  |
| Elongation @ Break            | ASTM D751                  | 40% x 30%  |
| Heat Aging                    | ASTM D3045                 | 80% x 80%  |
| Tear Strength                 | ASTM D751                  | 100 lbs. x 100 lbs.                                      |
| Low Temp. Bend                | ASTM D2136                 | Pass (-40°F)   |
| Dynamic Puncturing            | ASTM D5635                 | 280 lbs.   |
| Permeance                     | ASTM E96                   | 0.003 Perms  |
| Dimensional Change            | ASTM D1204 @ 176°F, 6 hour | 0.3%   |
| Dimensional Change            | ASTM D1204 @ 212°F, 1 hour | 1.0%   |
| Water Immersion               | ASTM D570 @ 158°F, 1 week  | 1.0%   |
| Hydrostatic Pressure          | ASTM D751                  | 400 psi  |
| Ozone Resistance              | ASTM D1149                 | Pass   |
| EmmaQua                       | ASTM E838                  | Pass   |
| Solar Reflectivity            | ASTM E903                  | .822   |
| Emissivity                    | ASTM C1371                 | .915   |
| SRI                           | ASTM E1980                 | 109  |

Flex FB Plus Elvaloy® KEE Roofing Membranes are thermoplastic in nature and exceed the requirements of ASTM D4434 standard specification for poly vinyl chloride sheet roofing.

**WARRANTY**

The Flex FB Plus Elvaloy® KEE Roofing Membrane may receive the manufacturers standard five (5) year or optional ten (10) year, fifteen (15) year or twenty (20) year guarantee of watertightness.

Elvaloy® KEE is a registered trademark of DuPont.