

## 1. Kapton coated Kevlar (de-aluminized)

Three-layer Kapton/Kevlar/Kapton laminate material, 4-5mil thick x 48 inch wide, 150ft length

- front and back layer of ½ mil Kapton HN film
- middle layer of Kevlar 49 plain weave fabric, with 34 +/-2 yarns per inch in warp & fill direction, see more details below
- bonded together with low-outgassing\* adhesive
- no metallic metal shall be on final product

\*Definition of a low-outgassing: Nonmetallic materials which are exposed to space vacuum shall have been tested using the technique of ASTM-E595, Total Mass Loss and Collected Volatile Condensable Materials From Outgassing In A Vacuum Environment, Test Method for, with acceptance criteria of <0.1 percent Collected Volatile Condensable Materials (CVCM) and <1.0 percent Total Mass Loss (TML).

The cloth shall be made from Kevlar 49 yarn. 1.8+/-10% oz/yd. per ASTM-D-1910

Min breaking strength on the Kevlar 100lb/in warp and fill per ASTM-D-1682 1" Ravel Strip

Yarn type 195 - 1/0 per AMS 3902

## 2. Aluminized Kapton coated Kevlar

Three-layer aluminized Kapton/Kevlar/Kapton laminate material, 4-5mil thick x 48 inch wide, 150ft length

- front and back layer of ½ mil Kapton HN film
- middle layer of Kevlar 49 plain weave fabric, with 34 +/-2 yarns per inch in warp & fill direction, see more details below
- bonded together with low-outgassing\* adhesive
- metallic metal shall be on final product

\*Definition of a low-outgassing: Nonmetallic materials which are exposed to space vacuum shall have been tested using the technique of ASTM-E595, Total Mass Loss and Collected Volatile Condensable Materials From Outgassing In A Vacuum Environment, Test Method for, with acceptance criteria of <0.1 percent Collected Volatile Condensable Materials (CVCM) and <1.0 percent Total Mass Loss (TML).

The cloth shall be made from Kevlar 49 yarn. 1.8+/-10% oz/yd. per ASTM-D-1910

Min breaking strength on the Kevlar 100lb/in warp and fill per ASTM-D-1682 1" Ravel Strip

Yarn type 195 - 1/0 per AMS 3902

**EVALUATION CRITERIA:**

**BEST VALUE (TECHNICAL, COST AND DELIVERY)**