

STATEMENT OF WORK
FOR
FIBER-REINFORCED LAMINATED FLEXIBLE COMPOSITE FILMS

Using standard state of the art manufacturing capability and knowledge, the vendor shall provide two types of fiber-reinforced laminated composite flexible films capable of withstanding heat load without delamination.

- (1) One shall be a lower temperature flexible composite film capable of withstanding up to 320°C
- (2) One shall be a higher temperature flexible composite film capable of withstanding up to 400°C.

The vendor's proposal shall include a brief explanation of the manufacturing approach to achieve the desired performance. Salient features for the laminate materials include:

- (i) Both the lower and higher temperature flexible composite films delivered shall measure at least 4 feet wide and 150 feet long. The width of the 1 yard sample of higher temperature flexible composite film shall be between 2-4 feet.
- (ii) The construction of both flexible composite films shall use Zylon® PBO-AS as the internal reinforcement fibers and 0.0075" (three-quarter mil) Kapton polyimide films.
- (iii) Both flexible composite films shall incorporate two inner core layers consisting of a non-woven unidirectional Zylon® PBO-AS fibers oriented at 0° and 90°, with either the 0° or 90° direction aligned with the 150 foot long direction.
- (iv) The adhesive used to bond the two inner core layers of 0° and 90° non-woven unidirectional Zylon® PBO-AS fibers together with the outer Kapton films shall have a maximum use temperature of 320°C for the lower temperature flexible composite film and 400 °C for the higher temperature flexible composite film.
- (v) The Zylon® PBO-AS fibers used in the warp and fill directions shall be adequately spread to provide a filament spacing not to exceed 0.0017" (1.7 mils) average over one inch, and obtain a minimum warp and fill line strength of 180 lbs/inch based on ASTM D3039 tests and a slit tear strength of at least 25 pounds force based on Mil-C-21189 10.2.4 tests.
- (vi) The overall nominal thickness for both types of the flexible composite films shall be less than 0.004" (4 mils) which is to include the thickness of both Kapton films.
- (vii) The overall areal weight shall not exceed 2.7 ounces per square yard.

OPTION:

The Government will test the 1 yard trial sample of the higher temperature flexible composite film (400°C adhesive) to demonstrate the product has sufficient high temperature performance. If the results of the test are acceptable, the Government reserves the right to purchase an additional 50 yards.

DELIVERABLES:

DELIVERABLE	DUE DATE
50 yards x 4 feet of lower temperature (320°C) flexible composite film	Due 30 days ARO
1 yard x 2-4 feet trial sample of higher temperature (400°C) flexible composite film	Due 30 days ARO
OPTION: 50 yards x 4 feet of higher temperature (400°C) flexible composite film	Due 8 weeks after option is awarded.

SCHEDULE: Delivery shall be made 30 days ARO.

BEST VALUE EVALUATION CRITERIA

Selection and award will be made to that offeror whose offer will be most advantageous to the Government (See FAR 2.101, Best Value), with consideration given to the factors of manufacturing approach to satisfy salient feature, price, and past performance. Offers must provide: (1) adequate past performance information of at least three previous contracts held with Government Agencies or Private Industry, and (2) product literature or other information to allow the Government to determine technical merit.

The proposal will be evaluated based on the following criteria:

- Manufacturing approach to satisfy salient features.
- Past performance in providing similar product to customer. Provide references.
- Price