

## DATA SHEET

# CARBON FABRIC

Carbon fiber, also referred to as graphite fiber, is one of the strongest and stiffest reinforcements available. When properly engineered, carbon fiber advanced composites can achieve the strength and stiffness of metal parts at significant weight savings.

In addition to the high strength-to-weight and stiffness-to-weight ratios, carbon fibers are thermally and electrically conductive, have very low thermal expansion coefficients and have excellent fatigue resistance. The impact resistance of carbon fiber laminates, however, is less than most other composite materials. When first introduced to the commercial market, carbon fiber reinforcements were referred to as HMG or "high-modulus-graphite"; this was a reference to the high modulus of carbon fiber when compared with other available materials. Today that is somewhat of a misnomer. Standard yarn supplied to the commercial market is typically 530 KSI tensile strength, 34 MSI tensile modulus carbon fiber. Several yarn suppliers offer products with near identical properties considered interchangeable for all but the most stringent applications. High performance carbon fibers with increased tensile strength and/or modulus are available.

NOTE: Technical information furnished by HAWKEYE is based upon laboratory findings and believed to be correct. No warranties of any kind are made except that materials supplied are HAWKEYE standard quality. All risk and liability arising from handling, storage and use of HAWKEYE products, as well as compliance with applicable legal restrictions rests with the buyer.

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# CARBON FIBERS

| <b>FABRIC<br/>STYLE</b> | <b>WEAVE</b> | <b>WEIGHT<br/>OZ/SQ.YD</b> | <b>THICKNESS<br/>(MILS)</b> | <b>COUNT<br/>WARP FILL</b> | <b>YARN<br/>WARP</b> | <b>FILL</b> |
|-------------------------|--------------|----------------------------|-----------------------------|----------------------------|----------------------|-------------|
| 272*                    | Crowfoot     | 5.5                        | 8.5                         | 12 X 12                    | 3K                   | 3K          |
| 282*                    | Plain        | 5.7                        | 9.0                         | 12.5 X 12.5                | 3K                   | 3K          |
| 433                     | 5-HS         | 8.4                        | 10.5                        | 18 X 18                    | 3K                   | 3K          |
| 584*                    | 8-HS         | 10 .5                      | 13.5                        | 24 X 24                    | 3K                   | 3K          |
| 613                     | 5-HS         | 11.0                       | 15.0                        | 12 X 12                    | 6K                   | 6K          |
| 690                     | 2X2 Basket   | 19.3                       | 27.0                        | 10 X 10                    | 12K                  | 12K         |

\*Certified to BMS 9-8

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### FIBERGLASS CLOTH

Hawkeye International, Ltd. offers a wide range of fiberglass fabrics. Hawkeye has the capabilities to supply all Mil Spec C9084 fabrics, all types and classes. Listed below is a small sampling of our fiberglass products.

| <b>STYLE</b> | <b>WEAVE</b> | <b>COUNT</b> | <b>WEIGHT<br/>OZ/YD2 (G/M2)</b> | <b>THICKNESS<br/>INCHES (mm)</b> |
|--------------|--------------|--------------|---------------------------------|----------------------------------|
| 120          | Crowfoot     | 60 X 58      | 3.16 (107.14)                   | .0035" (.0889 mm)                |
| 181          | 8H Satin     | 57 X 54      | 8.90 (301.75)                   | .0080" (.2032mm)                 |
| 1527         | Plain        | 17 X 17      | 12.30 (417.03)                  | .0150" (.3810mm)                 |
| 1543         | Crowfoot     | 49 X 30      | 8.50 (288.19)                   | .0080" (.2032mm)                 |
| 1800         | Plain        | 16 X 14      | 9.80 (3332.27)                  | .0120" (3048mm)                  |
| 3733         | Plain        | 18 X 18      | 5.80 (196.65)                   | .0080" (.2032mm)                 |
| 7500         | Plain        | 16 X 14      | 9.60 (325.49)                   | .0110" (.2794mm)                 |
| 7544         | Plain        | 28 X 14      | 18.00 (610.29)                  | .0200" (.5080mm)                 |
| 7587         | Mock Leno    | 40 X 21      | 20.50 (695.05)                  | .0300" (.7620mm)                 |
| 7597         | 12H Satin    | 30 X 30      | 38.50 (1,305.34)                | .0440" (1.1176mm)                |
| 7781         | 8H Satin     | 57 X 54      | 8.95 (303.45)                   | .0090" (.2286mm)                 |
| <b>SCRIM</b> |              |              |                                 |                                  |
| 659          | Leno         | 20 X 10      | 1.60 (54.25)                    | .0042" (.1067mm)                 |

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# HK2800 FIBERGLASS TAPE

HK2800 Fiberglass Tapes are narrow width woven fabrics for use in plastic shop or metal bond areas. Tapes range from one inch to twelve inches in width. They can be used as reinforcement in production of laminates or as narrow bleeder or breather fabrics in plastics, metal bond and composite structures.

Provided in "tape" form, it eliminates the many frayed edges and loose strands that result from merely piece-cutting broader fiberglass fabrics. This will lower complaints from shop personnel who find it difficult working with glass fabrics.

### SPECIFICATIONS

|             |                             |
|-------------|-----------------------------|
| Thickness:  | .012"                       |
| OZ/Sq Yard: | 8.71                        |
| Roll Size:  | 50 Yards (3 inch core)      |
| Finish:     | Greige or volan-type finish |

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## DATA SHEET

# KEVLAR FABRICS

### KEVLAR 49 FABRICS

| FABRIC<br>STYLE | WEAVE      | WEIGHT<br>OZ/SQ. YD | THICKNESS<br>(MILS) | COUNT   |         | YARN    |      |
|-----------------|------------|---------------------|---------------------|---------|---------|---------|------|
|                 |            |                     |                     | WARP    | FILL    | WARP    | FILL |
| 120             | Plain      | 1.8                 | 4.5                 | 34 x 34 | 195 de  | 195 de  |      |
| 281             | Plain      | 5.0                 | 10.0                | 17 x 17 | 1140 de | 1140 de |      |
| 285             | Crowfoot   | 5.0                 | 10.0                | 17 x 17 | 1140 de | 1140 de |      |
| 328             | Plain      | 6.4                 | 13.0                | 17 x 17 | 1420 de | 1420 de |      |
| 500             | Plain      | 5.0                 | 10.0                | 13 x 13 | 1420 de | 1420 de |      |
| 900             | 5-HS       | 9.0                 | 13.0                | 17 x 17 | 2160 de | 2160 de |      |
| 1350            | 4x4 Basket | 13.5                | 29.0                | 26 x 22 | 2160 de | 2160 de |      |
| 1033            | 8x8 Basket | 16.0                | 31.0                | 40 x 40 | 1420 de | 1420 de |      |

### KEVLAR 29 FABRICS

| FABRIC<br>STYLE | WEAVE      | WEIGHT<br>OZ/SQ. YD | THICKNESS<br>(MILS) | COUNT   |         | YARN    |      |
|-----------------|------------|---------------------|---------------------|---------|---------|---------|------|
|                 |            |                     |                     | WARP    | FILL    | WARP    | FILL |
| 710             | Plain      | 9.6                 | 17.0                | 24 x 24 | 1500 de | 1500 de |      |
| 713             | Plain      | 8.3                 | 15.0                | 31 x 31 | 1000 de | 1000 de |      |
| 728             | Plain      | 6.7                 | 12.0                | 17 x 17 | 1500 de | 1500 de |      |
| 735             | 2x2 Basket | 14.3                | 25.0                | 35 x 35 | 1500 de | 1500 de |      |
| K29/16DP        | 4x4 Basket | 16.5                | 25.7                | 21 x 21 | 3000 de | 3000 de |      |
| K39/20DP        | 4x4 Basket | 19.7                | 38.0                | 24 x 24 | 3000 de | 3000 de |      |

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