

MATERIALS / NON-METALLICS

FNHA-2-F-001.00

**TAPE ELECTRICAL****1. SCOPE**

1.1 This specification describes an indoor and outdoor environment tape product which is used to insulate electrical connections. This tape shall be composed of a premium grade all weather vinyl. It's designed continuous temperature range shall be from -18°C (0°F) to 105°C (220°F).

1.2 This specification may involve hazardous materials, procedures and apparatus. This specification does not address the health and safety problems associated with its application or use. It is the specification user's responsibility to follow appropriate health or safety practices and determine the application or regulatory limitation before use.

**2. APPLICATION**

This tape material was originally released to provide insulation for electrical connections.

**3. DESIGNATION**

The Engineering drawing shall contain the following notation for the specification of the subject tape. As described in standard 86511126 (FNHA-3-B-100), the Applicable Standards blocks will each include a space for one standard. The part number shall be the number of this specification and the name shall be the name of this specification.

**4. RELATED SPECIFICATIONS****4.1 REFERENCE STANDARDS**

UL - Underwriters Laboratories.  
UL 510 - Standard "Insulating Tape" (product category OANZ).  
CSA - Canadian Standards Association.  
C22.2 No.197-M1983 - "PVC Insulating Tape."  
ASTM D1000 - Method of Testing Pressure-sensitive Adhesive Coated Tapes Used for Electrical Insulation.

4.2 This standard replaces the following company standard:

VERSATILE

MS-047

**5. REQUIREMENTS****5.1 MATERIALS**

The backing material shall consist of polyvinyl chloride (PVC).

The adhesive shall be a pressure-sensitive rubber based.

The tape shall be UL listed and marked per UL Standard 510 as "Flame Retardant, Cold and Weather Resistant."

**5.2 PHYSICAL PROPERTIES**

The physical requirements and typical data for the electrical tape are listed in Table 1.

|            |         |     |         |         |                                                                                                                                                                                                        |                           |      |
|------------|---------|-----|---------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------|
|            |         |     |         |         | NAME                                                                                                                                                                                                   | STD TAPE ELECTRICAL       |      |
|            |         |     |         |         |                                                                                                                                                                                                        |                           |      |
|            |         |     |         |         |  <b>NEW HOLLAND</b>                                                                                                 | ENGINEERING SPECIFICATION |      |
| ALL        | C       | JDF | 112583  | 9/11/98 |                                                                                                                                                                                                        |                           |      |
| ALL        | B       | RLF | 110229  | JUL 97  |                                                                                                                                                                                                        |                           |      |
| ALL        | A       | RE  | 106973  | 951003  |                                                                                                                                                                                                        |                           |      |
| FRAME NO.  | REV     | BY  | ECN NO. | DATE    |                                                                                                                                                                                                        |                           |      |
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| KHH OCT 95 | CHECKED |     |         |         |                                                                                                                                                                                                        | PART NUMBER               |      |
|            |         |     |         |         |                                                                                                                                                                                                        | 86050058                  |      |

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TABLE 1 - TYPICAL, PHYSICAL, AND ELECTRICAL PROPERTIES

| DESCRIPTION                                 | REQUIREMENTS        | UNITS          | METHODS               |
|---------------------------------------------|---------------------|----------------|-----------------------|
| Temperature Ratings                         | 80°(176°)           | °C (°F)        | UL 510                |
| Handling                                    | -18° (0°)           | °C (°F)        | CAS C22 NO. 197-M1983 |
| Continuous Operation                        | 105° (220°)         | °C (°F)        | CAS C22 NO. 197-M1983 |
| Color                                       | Black               |                |                       |
| Thickness                                   | 7                   | mils.          | ASTM D-1000           |
| Adhesion to Steel                           |                     |                |                       |
| At 22°C (72°F)                              | 28                  | oz./in.        | ASTM D-1000           |
| At -18°C (0°F)                              | 60                  | oz./in.        | ASTM D-1000           |
| Adhesion to Backing                         |                     |                |                       |
| At 22°C (72°F)                              | 25                  | oz./in.        | ASTM D-1000           |
| At -18°C (0°F)                              | 60                  | oz./in.        | ASTM D-1000           |
| Breaking Strength                           |                     |                |                       |
| At 22°C (72°F)                              | 15                  | lbs./in.       | ASTM D-1000           |
| Ultimate Elongation                         |                     |                |                       |
| At 22°C (72°F)                              | 250                 | percent        | ASTM D-1000           |
| At -18°C (0°F)                              | 100                 | percent        | ASTM D-1000           |
| Flammability                                |                     |                |                       |
| Maximum                                     | 1                   | sec.           | UL 510                |
| Maximum                                     | 4                   | sec.           | ASTM D-1000           |
| Accelerated Aging                           | 80                  | percent        | ASTM D-1000           |
| Flagging                                    | <0.1                | inches         | ASTM D-1000           |
| Telescoping                                 |                     |                |                       |
| 24 hours @ 0°C (120°F)                      | <0.1                | inches         |                       |
| Electrical Properties                       |                     |                |                       |
| Voltage Rating                              | 600                 | volts          | UL 510                |
| Dielectric Breakdown                        |                     |                |                       |
| Standard Condition                          | 1250                | volts          | ASTM D-1000           |
| High Humidity                               | 90                  | percent of std | ASTM D-1000           |
| Insulation Resistance(High Humidity Method) | 1 X 10 <sup>6</sup> | megohms        | ASTM D-1000           |



NAME

STD TAPE ELECTRICAL

ENGINEERING SPECIFICATION

REV.  
CFRAME  
2OF  
3

PART NUMBER

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