

## 76593 Fusa-Flex® Tape

76593 Fusa-Flex, is a B-staged epoxy-coated polyester-glass tape that fuses during cure to provide a tough moisture and chemical seal. Insulation for coils can be easily flexed for winding, even pounded and scuffed without breaking the seal. The epoxy resin in the tape flows with heat during the curing process, while the polyester wrap threads shrink, pulling the tape down tightly. This insures a leakproof seal without the need for any external pressure. The simple processing of this material makes it adaptable to commonly used cure cycles.

### Quick Cure Time Low Cure Temperature

Cure Time is only one to two hours at 170°C, three to four hours at 150°C, or six to eight hours at 130°C. This results in much shorter processing time, increased oven capacities, quicker "turn around" times for repair jobs and less downtime on critical customer repairs. The lower curing temperatures reduce the risk of thermal shock to magnet wire enamel.

### Dissipation Factor

Dissipation Factor is an important property in AC equipment. This is a measure of the proportion of electrical energy which is transformed into heat within the insulation itself. Heat not only degrades the insulation, but also makes electrical conduction in the copper less efficient. Fusa-Flex Sealable Armor Tape exhibits a good dissipation factor after cure, and it improves with time under operating temperatures.

### Dielectric Constant

This is a measure of the ability of a material to store electrical energy. This property is important in two respects:

1. Arcing rapidly degrades insulation. One of the causes of arcing is material with a high dielectric constant which will store a charge. Fusa-Flex sealable armor tape has a low dielectric constant (value of 5 measured at 60 cycles per second), which minimizes arcing.
2. An armor with a high dielectric constant places most of the voltage stress on the ground insulation - the most vital part of the system. Fusa-Flex Sealable Armor Tape matches the low dielectric constant of mica ground insulation. This allows more accurate design of required insulation build to meet specifications.

### Environmental Protection

Fusa-Flex Sealable Armor Tape's tough epoxy armor withstands salt water, abrasive atmospheres, chemicals, and solvents.

### Application

Fusa-Flex Sealable Armor Tape may be applied over any cured or uncured mica ground insulation. For a sealed system on coils 600 volts or less, two layers of 3/4" Fusa-Flex Sealable Armor Tape half lapped over the entire coil is recommended; On coils of this type, no ground insulation is required on the coil nose. The two layers of Fusa-Flex Sealable Armor Tape give complete insulation protection in this case. Should be at room temperature or warm when used.

**Note:** When taping the coil nose, it is recommended that the trailing edge of the tape (the edge that overlaps the previous wrap) lay down tightly. This will prevent a "shingle" effect on the outer radius of the nose.

## Chemical and Solvent Resistance

<u>Chemicals</u>	<u>Immersion Time (hrs)</u>	<u>Weight Loss (%)</u>
10% NaOH	240	5
10% H <sub>2</sub> SO <sub>4</sub>	240	2
Water	240	0
3% NaCl	240	0

### Solvents (4 day Immersion)

	<u>Weight Loss %</u>	<u>Swell %</u>
Benzene	0.1	Nil
Toluene	Nil	Nil
Xylene	Nil	Nil
Aliphatic Hydrocarbons	Nil	Nil
Alcohols	Nil	Nil
Esters	7	Nil
Ketones	Nil	Nil

### LIMITATIONS OF WARRANTY

ANY REVIEW, RECOMMENDATION, OR STATEMENT, MADE ON BEHALF OF VONROLL ISOLA USA, INC. RELATING TO ANY ENGINEERING DESIGN, ARCHITECTURAL DRAWING, PRODUCT FORMULATION, END-USE SPECIFICATION, OR THE LIKE IS LIMITED TO KNOWLEDGE OF PRODUCT PROPERTIES AS DETERMINED BY TESTING OF TYPICAL MATERIAL PRODUCED BY VONROLL ISOLA USA, INC. ANY COMMENTS OR SUGGESTIONS RELATING TO ANY SUBJECT OTHER THAN SUCH PRODUCT PROPERTIES ARE OFFERED ONLY TO CALL TO THE ATTENTION OF THE ENGINEER, ARCHITECT, FORMULATOR, END-USER, OR OTHER PERSON, CONSIDERATIONS WHICH MAY BE RELEVANT IN HIS INDEPENDENT EVALUATION AND DETERMINATION OF THE APPROPRIATENESS OF SUCH DESIGN, DRAWING, SPECIFICATION, DOCUMENT OR FORMULA. VONROLL ISOLA USA, INC. EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY DAMAGE, HARM, INJURY, COST OR EXPENSE TO ANY PERSON RESULTING, DIRECTLY OR INDIRECTLY, FROM THAT PERSON'S OR ANY OTHER PERSON'S, RELIANCE ON ANY SUCH REVIEW, RECOMMENDATION, STATEMENT, COMMENT OR SUGGESTION.

AS VONROLL ISOLA USA, INC. HAS NO CONTROL OVER THE USE TO WHICH OTHERS MAY PUT ITS PRODUCTS, IT DOES NOT CLAIM OR WARRANT THAT IN YOUR PARTICULAR CIRCUMSTANCES, THE RESULTS YOU WILL OBTAIN FROM THE USE OF THE PRODUCT WILL BE THE SAME AS THOSE DESCRIBED IN THIS COMMUNICATION, OR THAT YOU WILL FIND THE INFORMATION OR RECOMMENDATIONS COMPLETE, ACCURATE, OR USEFUL. THE COMPANY ACCEPTS NO LIABILITY, IN NEGLIGENCE OR OTHERWISE, FOR ANY DAMAGE RESULTING FROM YOUR RELIANCE ON THE INFORMATION OR RECOMMENDATIONS IN THIS COMMUNICATION. YOU SHOULD TEST THE MATERIAL TO DETERMINE IF THE MATERIAL IS SUITABLE, AND/OR OUR CLAIMS VALID, IN YOUR PARTICULAR CIRCUMSTANCES. NONE OF THE POSSIBLE OR SUGGESTED USES OF THE MATERIALS IN THIS COMMUNICATION ARE A LICENSE UNDER ANY VONROLL ISOLA USA, INC. PATENT COVERING SUCH USE OR A RECOMMENDATION FOR USE OF SUCH MATERIALS IN THE INFRINGEMENT OF ANY PATENT.

(11/97)

(Fusa-Fab® is a Trademark of vonRoll Isola USA, Inc.