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Product Update – March 2006

Ablefilm® 5025E Specifications, Packaging and Labeling

Ablefilm 5025E is one of the most widely used conductive film adhesives in the Emerson & Cuming product line. Combining properties of high conductivity, excellent adhesion and good flexibility with ease of processing, it is the ideal solution for many bonding needs in the electronics industry. Responding to customer feedback in the last few months, sister companies Emerson & Cuming and Ablestik Laboratories have implemented several improvements in certification testing, packaging and labeling that are summarized in this update.

SPECIFICATIONS

Effective immediately, we are testing and certifying all 5025E shipments to include the entire acceptance test protocol specified by MIL-STD-883F (Department of Defense, Test Method Standard, Microcircuits), method 5011.4 (Evaluation and Acceptance Procedures for Polymeric Materials). This includes visual examination, work life, thermogravimetric analysis for weight loss and filler content, ionics content, bond strength, and volume resistivity. Previously, some orders were certified only to a subset of these procedures. With this more comprehensive test protocol applied to all shipments, Emerson & Cuming is providing the highest quality product possible to all customers.

PACKAGING

Packaging of 5025E to withstand all shipping conditions around the world is a challenge because of its brittle nature below 0°C. This past year we reviewed in detail the packaging method for 10" x 12" sheetstock, the most common size we ship.

Our primary finding was that the packaging method could allow for movement of sheets against each other, opening the potential for cracking of cold product. The clear solution was to develop a package that held the material more firmly. The basic concept of sandwiching the sheetstock between two pieces of a stiffener material was maintained, but refinements were added as follows:

- Outer sandwich material was replaced by ¼" thick high density polyethylene board for its increased stiffness.
- Inner plastic bag around the sheets and between the polyethylene boards has been eliminated. When sealed, this bag acts as a cushion between the polyethylene boards, preventing them from firmly holding the sheets together and therefore allowing them to be jostled in the open space. Note that the 5025E sheets are already protected between coated white paper release liners. *All packaging instructions for sheetstock have been changed to eliminate bagged sheets, whether individually or in multiple sheets.*
- Soft foam sheets continue to be wrapped around the polyethylene boards to cover sharp edges. The entire package is contained in a heavy metallized plastic bag that is vacuum sealed to ensure all material is firmly held in a clean environment.

This revised packaging method has eliminated cracked sheets in our internal testing and customer feedback has been very positive.



LABELING

When 5025E was first developed, it was certified to MIL-STD-883 (Department of Defense, Test Method Standard, Microcircuits), method 5011 (Evaluation and Acceptance Procedures for Polymeric Materials). The shelf life requirement for this method is a minimum of 12 months at -40°C, which 5025E met. With the recognized brittleness at this temperature and the potential for damage, Emerson & Cuming now recommends storage at +5°C, with a minimum shelf life of 6 months. While -40°C storage is a viable customer option, we believe the tradeoff in minimizing damage vs. shelf life favors the +5°C storage condition. In addition, all shipping is now done with “blue ice” instead of dry ice to minimize exposure to extreme cold. Effective immediately, all labels and certifications will specify +5°C as the preferred storage condition, with -40°C as an option.

For those who choose to store at -40°C, we do recommend additional care in handling at this temperature to minimize breakage. Regardless of the storage temperature, it is important to make sure the product is completely stabilized at room temperature before opening the sealed package. This will ensure it is in a fully flexible state and also that no condensation of atmospheric water occurs on the product.

For further information, please contact your local sales engineer, customer service representative, or product support at 1-800-832-4929.