



August 24, 2006

Dura-Tite Systems, LLC  
Mr. Jim Karnes  
450 W. 29<sup>th</sup> St.  
Eire, PA 16508

**SUBJECT:** Flammability Testing of Non-Metallic Dura-Tite Systems Duct Connector

Dear Mr. Karnes,

This is in response to our various conversations and emails over the past few weeks regarding the flammability testing of your subject connector.

Because of building ducts and plenums intended purpose of transmitting environmental air to different parts of a building, the codes have always been concerned about fire and smoke in ducts and plenum spaces. Accordingly, building codes require materials in these spaces to have specific flammability and smoke producing limits. (see International Mechanical Code and NFPA 90A for examples). There are various fire test methods that address this concern.

The primary standard that addresses this hazard is ASTM E84 (UL723, NFPA 255). The general requirement is that materials must achieve a flame spread of 25 or less and smoke developed of 50 or less. Over the years, various exceptions or options have been made to this test method due to the fact that some products do not lend themselves to the ASTM E84 mounting technique. Examples include, NFPA 262 (wire and cable), UL1820 (pneumatic tubing), UL1887 (plastic sprinkler pipe) and UL2043 (discrete products such as loudspeakers and other small, discrete electrical products).

Although the codes currently reference UL2043 in relation to discrete electrical products, UL recognized a few years ago that UL2043 could also be used to test non-metallic, discrete, non-electrical products that did not lend themselves to the ASTM E84 test. Examples include floor diffusers, duct support webbing, plastic cable ties, pipe hangers, etc. Accordingly, a product category was established for these types of products. Please refer to UL.com to view those UL Classified products under this category. (click on Certifications and search by UL Category Code: **BHZF**)

We are currently in the process of drafting several proposed changes to UL2043. Included will be an expansion of the scope of the standard to include non-electrical products.

UL believes that UL2043 is a more appropriate test method to assess the flammability and smoke characteristics of your Dura-Tite system connectors than ASTM E84, due to the sample size and configuration. Furthermore, we do not feel that UL 181 is appropriate for your product either.



Class 0 and Class 1 flammability ratings in UL181 are applicable to air ducts, not connectors of the type you manufacture.

Should you have any questions or comments, please do not hesitate to contact us.

Regards,

A handwritten signature in black ink, appearing to read "R. K. Laymon". The signature is written in a cursive style with a large initial "R" and a long, sweeping underline.

R. K. Laymon  
Senior Staff Engineer  
Fire Protection Dept.