

## **Effect of UV Sterilization Equipment Used in Air Handling Systems on K-Flex Closed – Cell Elastomeric Insulation**

UV sterilization equipment is sometimes used in air handling systems. These systems give off UV light that is intended to kill mold spores and bacteria. They may be located within duct work or air handling units.

Flexible, closed-cell elastomeric insulation materials are subject to surface degradation due to long-term or intense UV exposure. When UV sterilization systems are used in air handling systems insulated with elastomeric insulation materials, it is necessary to provide a protective coating to protect the insulation from this UV exposure.

K-Flex® 374 Protective Coating is an ideal choice for this application. K-Flex 374 has an ASTM E84 rating of 5/5 for flame / smoke, well below the 25/50 maximum limit for use in air handling systems and duct work. In addition, the K-Flex 374 contains an EPA-registered (#50534-115-1100) antimicrobial agent for additional mold and mildew control.

Other coatings such as Foster Fungicidal Protective Coating 40-20 have also been recommended for this application. Comparable products are available from other manufacturers, including Design Polymerics. The coating manufacturer should be consulted to determine acceptability for use with elastomeric insulation materials. These coatings should be installed in accordance with the manufacturers' requirements.

Because the strength of the UV sterilization system varies by manufacturer, we recommend that they be consulted for guidance to determine how far from the UV source the insulation needs to be for protection.