Page 20: Dave Yates: Legionella and COVID-19

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A flue gas venting option

The use of correct building materials for any job is essential.

he use of plastic venting systems on gas fired water heaters, furnaces and boilers has undergone a significant change. NFPA 54-18 (National Fire Protection Association), National Fuel Gas Code and IFGC-18 (International Fuel Gas Code) now recognizes the UL 1738 venting standard as an option for venting Categories II and IV gas fired appliances.

The change to these model codes empowers relevant authorities to allow the use of a vent material specified by the appliance manufacturers to be certified to the UL 1738 venting standard.

The safety concern today is in the use of plumbing Solid Wall Schedule 40 or Foam Core DWV pipe and fittings in FGV applications. These products were never intended to be used in FGV applications, but they have been chosen because they are often the least expensive materials available.

Some manufacturers of these products have stated repeatedly that these products are not designed for FGV. These products do not meet the key performance requirements nor most of the material requirements of UL 1738. Simply put, plumbing DWV products are not designed to meet the life safety standards of FGV applications.

ASTM Standards versus UL 1738

Currently, the use of thermoplastic plumbing products are referenced in the ANSI Z21 appliance standards as being suitable materials in FGV applications; provided that they comply with specific ASTM standards and are certified by the appliance manufacturer as an approved



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option for venting.

However, these ASTM standards are for fluid handling applications only. For example, ASTM D1785-15 is a standard for pressure-rated Schedule 40, 80 and 120 PVC pipe intended for use with distribution of pressurized liquids only.

In fact, the 2015 standard states: "This standard specifies dimensional, performance and test requirements for plumbing and fluid handling applications only. It does not include provisions for the use of these products for venting of combustion gases. UL 1738 is a standard that does include specific testing and marking requirements for flue gas venting products, including PVC."

For peace of mind, choose UL 1738-certified products that include specific testing and marking requirements for FGV applications. In addition, part of the certification process includes formal approval of all installation instructions, and special marking and labeling requirements for pipe, fittings and cement. It is important to note that different manufacturers have different joint systems and/or cements. UL 1738 stipulates: Do not mix pipe, fittings or joining methods from different manufacturers.

Meeting the UL 1738 standard ensures that the venting system is suitable and safe for FGV applications intended to vent categories II and IV gasburning appliances.

Why specify UL 1738?

FGV is a life safety application and UL 1738 is a specific standard that qualifies the use of metallic or nonmetallic products specifically manufactured for FGV applications. The use of correct building materials for any job is essential. For a flue gas venting installation, it mitigates risk because it is a matter of life or death. It is particularly important that the appropriate FGV piping system be used to ensure poisonous gases, such as carbon monoxide, are properly exhausted.



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Matthew Tucci is a market development specialist - System 1738 Flue Gas Venting at IPEX USA. Tucci's primary focus, within IPEX, is the planning and implementation of market development activities such as educating market stakeholders, participating in FGV Codes and Standards Committees and working with customers.