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EVERYDAY

ME-017 Rev. 5

ABS, PVC, and CPVC VENTING SYSTEMS
MECHANICAL & ENGINEERING
June 21, 2008
Update

Gas fitters (installers) shall only utilize the plastic piping materials that have been certified to the ULC S636 Standard for special venting systems when it is specified by the appliance manufacturer.

Background: Gas fitters are reminded that the design and installation of plastic venting systems will ensure that the type of vent complies with the Code. The material used shall ensure that its performance does not fall below a level established by a recognized standard. The venting systems serving Category II, Category III, Category IV, Direct-vent appliances, and appliances with integral vents shall comply with Table 8.5.

Clause 8.10.1. – A special venting system or a BH venting system shall be installed in accordance with the terms of its listing and the appliance and vent manufacturer's certified installations instructions.

Clause 8.11. – A Type B, BH, BW, or L vent or a factory-built chimney used for venting an appliance shall be certified.

(**Note:** Underwriters Laboratories of Canada (ULC) S636 is the Standard for Type BH Gas Venting Systems.)

The B149 2007 Code Supplement changes approved by the National Code Committee are as follows:

EFFECTIVE April 1, 2007 in Manitoba

Clause 8.9.5. – Venting systems, or total vent run if less than 3ft (900 mm), that employ plastic vents shall be installed such that the first 3ft (900 mm) from the appliance flue outlet is readily accessible for visual inspection.

Clause 8.9.6. – Vents constructed using plastic piping shall be certified to ULC S636.

Supplied non-approved Manufacture Fittings & Termination Kits are acceptable for installation up to October 1, 2008 as per the recommendation of the Interprovincial Gas Advisory Council.

Mechanical and Engineering has been aware of problems associated with thermoplastic pipe that is used to vent natural gas and propane appliances. Failure of the venting system may allow the escape of carbon monoxide and other products of combustion into occupied areas.

Installers are reminded that Clause 4.1.4. indicates, where a conflict exists between the manufacturer's certified installation instructions and the Code, **the requirements of the Code shall prevail unless otherwise approved.** Therefore, instructions that conflict with Code requirements can be modified by the authority having jurisdiction, for reasons of safety and performance.

Therefore, as the use of thermoplastic piping materials (unapproved), including schedule 40 Cellular Core ABS (ASTM F628) or Cellular PVC (ASTM F891) piping could lead to leakage and/or breakage in the venting systems; it is not an acceptable material for venting gas appliances in Manitoba. The escape of flue gases into the building could result in an imminent serious danger to persons or a risk of property damage, such as a carbon monoxide exposure or an unacceptable risk of damage due to undetected escape of water vapour from the products of combustion into a building.

When utilizing thermoplastic piping system to vent a gas-fired appliance all piping materials, fittings, and solvent cements shall be compatible. Do not mix and match the various piping materials, fittings and solvent cements.

However, the venting configuration including the radius of elbows and termination kits when specified shall be installed in accordance with the manufacturer's certified instructions and the Code.

Under the Gas and Oil Burner Act it is the responsibility of the gas fitter to ensure that the type of vent and methods of venting gas appliances complies with the Act and are in accordance with the regulations and the CSA – B149.1 Natural Gas and Propane Installation Code.

Effective Immediately on Hot Water Heaters

ABS piping has been found to become brittle and shatter, crack, distort, leak, shear, and fatigue which all seem to increase with age especially on hot water heater installations. The resulting escape of flue gases into a building could result in an imminent danger to persons from carbon monoxide and/or a risk to property damage. Therefore the unapproved thermoplastic materials are not acceptable for use in venting gas hot water heaters in Manitoba.

Combustion Air Intake Plastic Piping Material

The combustion air intake piping material shall be in accordance with the manufacturer's certified installation instructions. When utilizing plastic piping systems for combustion air intakes; all piping materials, fittings, and solvent cements shall be compatible.