GAS SAFETY
Information Bulletin

STANDATA

November 2010

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PVC, CPVC and PPE VENTING SYSTEMS

Subject: DAMAGE DUE TO DETERIORATION OR STRESS CONDITIONS

This bulletin has been jointly developed by Safety Services and the Gas Technical Council to inform the gas industry of the requirements in the **Natural Gas and Propane Installation Code CSA-B149.1-10** adopted in Alberta effective **September 1, 2010**.

Designers, Installers and **Safety Codes Officers** 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 and the following:

> **Clause 8.9.5 –** Venting systems that employ plastic vents shall be installed such that the first 3 ft (900 mm), or total vent run if less than 3 ft (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.
>
> **Clause 8.10.4. –** 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 installation 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.)

Municipal Affairs has been made 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

Government of Alberta

Issue of this STANDATA is authorized by the Administrator

[Original signed]
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requirements can be modified by the authority having jurisdiction, for reasons of safety and performance.

The **Natural Gas and Propane Installation Code CSA-B149.1-10** requires installers to utilize the plastic piping materials that have been certified to the **ULC S636** "Standard for Type BH Gas Venting Systems".

When utilizing a thermoplastic piping system to vent a gas-fired appliance the installer shall comply with the following:

- Pipe, fittings, and solvent cements are installed as a system and as per the manufacturer's certified installation instructions. (Do not mix and match the various piping materials, fittings and solvent cements from different manufacturers.)
- The certified plastic venting system shall be suitable for the flue gas temperatures expected in the venting system as per the appliance manufacturer's instructions.
- When a plastic venting system is used with a condensing boiler it shall be ULC-S636 approved CPVC gas venting materials, unless it can be validated that the **flue gas** temperatures will never exceed 149˚F (65˚C).
- All joints shall be assembled using an approved solvent cement or cement and primer to achieve a properly bonded joint (Do not use a primer on any ABS appliance connections and use only approved transition solvent cements.)
- The venting system shall not be painted or insulated in conditioned spaces. (The plastic materials and markings must be visible for inspection and maintenance)
- The installer shall ensure that the manufacturer's instructions are left with the owner. (Gas venting systems should be checked annually by a qualified person)
- Some chemicals found in common construction insulation, sealants and adhesives may react with and damage the vent system. Ensure interactions are considered for building penetrations involving insulation, sealants and adhesives that may come in contact with the vent system.

Note: Except for the appliance flue connection, S636 certified materials are required specifically for the portions of the venting system that is exposed to the products of combustion.

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.

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.

Under the ***Safety Codes Act*** it is the responsibility of the designers and installers to ensure that the type of vent and methods of venting gas appliances complies with the *Act* and are in accordance with the regulations.