



Canadian Institute
of Plumbing & Heating

POSITION PAPER

CIPH Position in response to Safe Kids Canada proposal to pre-set the water temperatures on residential hot water heaters from 60°C to 49°C.

Updated: October 10, 2003

SITUATION:

In August of 2001, Safe Kids Canada presented a proposal to the Canadian Advisory Council on Plumbing (CACP)* that recommended hot water heater tanks be factory pre-set at 49° C in order to reduce the potential for scalds to children and the elderly. A task force consisting of Canadian Institute of Plumbing and Heating (CIPH), Mechanical Contractors of Canada (MCAC), Ontario Plumbing Inspectors Association (OPIA), Health Canada, CSA and CACP regulators was established to address the proposal.

The Task Force met on January 16, 2002 to review the proposal. After thoroughly examining the health and safety issues, they recommended that the factory shipped water heater pre-set temperature be maintained at (60° C) 140F as currently mandated in the National Plumbing Code of Canada, however, they also recommended an option which allows for the installation of a tempering device that would ensure water does not exceed 49° C at point of use.

In the interim, Safe Kids Canada proposed to the Canadian Commission on Building and Fire Codes that a "Special Change" be made to the National Plumbing Code which states that "Hot water heaters installed in residential occupancies shall be set at 49°C at time of installation."

CIPH and the Task Force responded by requesting revisions to the proposed Safe Kids "Special Change". This was presented to the Executive Committee of the Canadian Commission on Building and Fire Codes on Friday, April 4, 2002 in Ottawa.

The change proposed by the industry stated "The maximum temperature supplied to each fixture in a residential occupancy shall not exceed 49° C." The outcome of this meeting was that Safe Kid's "Special Change" to the Plumbing Code would not be implemented, at least until the public has an opportunity for input.

The proposed amendment to Part 9 of the National Building Code and the National Plumbing Code has been endorsed by the CACP and will be issued for public review on January 2, 2003. The public review will extend until March 31, 2003 providing interested parties with an opportunity to comment. CACP also endorsed the position that the change is a code issue and not a standards issue. The proposed changes will be on CCBFC's website on January 2, 2003 – www.nationalcodes.ca.

ISSUES:

The following issues have been identified by stakeholders as concerns to the public should the hot water temperature be pre-set at 49°C:

1. Legionella bacteria – There is scientific evidence that demonstrates that water temperatures below 56°C provide a conducive environment for Legionella bacteria and Nontuberculous Mycobacteria to survive;
2. Lowering the factory setting to 49C will reduce the amount of available hot water resulting in an inadequate supply;
3. Consumer tampering with the water heater thermostat in an attempt to increase the amount of hot water could result in electrocution or inadvertently setting the temperature higher than 60°C thereby increasing the exposure to scalding
4. Larger size water heaters will be required to supply the same amount of hot water. In many cases, larger sized water heaters will not fit in the available space.
5. Many dishwashers and dish soap manufacturers recommend that the incoming water temperature be 60C /140F for the proper cleaning and sanitizing of dishes;
6. For health reasons, many people, particularly asthma sufferers, need to wash their linens and clothes in 60C/140F water.

THE GOAL:

It is the goal of CIPH and the Task Force to reduce the possibility of burns and scalds while protecting the health and safety of Canadians. CIPH and the Task

Force have thoroughly examined the health and safety issues and believe that the proposed code changes are win/win.

TASK FORCE RECOMMENDATION:

Where a hot water supply is required by Article 9.31.4.3 of the National Building Code, the maximum residential temperature shall be no greater than 49° C at point of delivery.

* Canadian Advisory Council on Plumbing (CACP) is a technical advisory committee that has a membership consisting of the Plumbing Industry Advisory Council, plumbing regulators, standards development organizations, accredited certification organizations, accredited testing laboratories and Health Canada.