

## Guidance on Preventing Domestic Hot Water Scalding

Every year around 20 people in the UK die as a result of scalds caused by hot bath water, and a further 570 suffer serious scald injuries that can result in long-term disability and disfigurement. The young and the old are most at risk because their skin is thinner and less tolerant to high water temperatures.



### Recommended Use

Although there is no legal requirement\* to limit water delivery temperatures, DEFRA recommend the use of thermostatic mixing valves (TMVs) for terminal fittings in schools, public buildings and other facilities used by the public. In addition, the Housing Corporation recommends thermostatically controlled supplies to bath taps in all housing. Thermostatic control of showers and all hot water taps is considered essential in housing for the elderly.

### TMV2 Valves

Valves are now available that have been Certified to the new BuildCert TMV2 scheme. These valves also maintain the pre-set temperatures even if the water pressure varies when other appliances are used. They are generally made to a different Standard from the TMV3 valves that are made to NHS specifications. The TMV2 valves require less frequent inspection or servicing than the TMV3 valves; making them more appropriate to domestic installations.

### Maximum Outlet Temperatures

The BuildCert TMV scheme recommends the following **maximum** hot water temperatures for use in all premises:

- 46°C for bath fill (please note this is not a safe bathing temperature)
- 41°C for showers

- 41°C for washbasins
- 38°C for bidets

**Temperatures should never exceed 46°C**

### Further Information

An information paper, '*Preventing hot water scalding in bathrooms: using TMVs*', explains how thermostatic mixing valves work. It has been written by the Thermostatic Mixer Valve Manufacturers Association (TMVA), the Child Accident Prevention Trust (CAPT) and the Building Research Establishment (BRE). The information paper advises on where TMVs should be used (housing, nursing homes, hospitals, schools, etc), illustrates their application in baths, basins and showers, and gives guidance on installation, commissioning and maintenance. It also emphasises the need for care in selecting thermostatic mixing valves that are appropriate for their intended use and provide



A thermostatic mixing valve

adequate protection. The new TMV2 approval scheme for TMVs is also explained.

The review of Part G of the Building Regulations also considers the inclusion of TMVs in domestic situations, and it is likely that the new Part G (October 2009) will contain requirements for TMVs to control hot water temperature for baths in new dwellings. Look out for further information on the CIPHE website [www.ciphe.org.uk](http://www.ciphe.org.uk) and in P&HE magazine.

Information Paper (ref IP 14/03) '*Preventing hot water scalding in bathrooms: using TMVs*' is available from the BRE bookshop, [www.brebookshop.com](http://www.brebookshop.com) or tel 020 7505 6622.

*The Chartered Institute of Plumbing and Heating Engineering cannot accept responsibility for any errors or omissions contained in this information.*