



Designation: F444 – 88 (Reapproved 2023)

Standard Consumer Safety Specification for Scald-Preventing Devices and Systems in Bathing Areas¹

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INTRODUCTION

This consumer safety specification addresses certain hazards in connection with bathtub areas as identified by the Abt Associates, Inc., final report, “A Systematic Program to Reduce the Incidence and Severity of Bathtub and Shower Area Injuries,” June 4, 1975, to the U.S. Consumer Product Safety Commission (CPSC).²

This consumer safety specification is directed towards scalds. The general requirements of this specification are intended to establish a maximum allowable discharge temperature and to provide for automatic compensation if that temperature is exceeded.

This specification establishes the necessary requirements to ensure safety from scalds for both the normal user capacity and limited user capacity of some aged, infirm, or young. These requirements can be attained through the utilization of devices, series of devices, or plumbing system designs that are available in the marketplace. Many of these devices are applicable to both new construction and retrofit installations. Specifications for the reliability and testing of these devices and systems are available in most cases from organizations such as the American National Standards Institute or the American Society of Sanitary Engineering.

1. Scope

1.1 This consumer safety specification covers scald-preventing devices and systems delivering water in bathing areas.

1.2 This specification establishes the minimum performance requirements for the devices and systems to minimize the risks associated with the hazards of scalds.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This consumer safety specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.03 on Safety Standards for Bathtub and Shower Structures.

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² Available from U.S. Consumer Product Safety Commission (CPSC), 4330 East-West Hwy., Bethesda, MD 20814.

2. Terminology

2.1 *bathing area*—bathing space that consists of a tub, tub-shower, or shower stall bounded by four walls, real or imaginary, extending vertically to the ceiling from the outside edge of the tub or stall.

2.2 *check valve*—valve designed to allow the flow of water in one direction only.

2.3 *device*—piece of equipment or mechanism designed to serve a special purpose or perform a special function.

2.4 *mixing valve*—device for mixing cold and hot water to produce an intermediate temperature as required, either manually, pressure-equalizing, or thermostatically controlled, and which is adjustable manually or by other means.

2.5 *safety shut-off device*—maximum temperature-limiting device that reduces the flow of water to a specified amount.

2.6 *scald*—first-, second-, or third-degree burn injury caused by the contact of hot water on the skin.

2.7 *stop-check valve*—valve designed to allow the flow of water in one direction only and which also has the capability to control the supply of water.

2.8 *stop valve*—valve used for the control of water supply.

2.9 *water outlet*—discharge opening through which water is supplied to a bathing area.