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ASSE Standard #1070-2004

ASSE Board Approved: February 2004

ASSE International

Performance Requirements for

Water Temperature Limiting Devices

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Foreword

This foreword shall not be considered a part of the standard; however, it is offered to provide background information.

ASSE standards are developed in the interest of consumer safety.

This standard is for devices which limit the water temperature to a fixture or fixtures such as sinks, lavatories or bathtubs to reduce the risk of scalding. The device shall be either the final temperature regulation or have water further tempered downstream of the device with the addition of cold water. The application of these devices are not intended to provide protection against thermal shock. Products in compliance with this standard are not intended for wall mounted showers.

This standard covers devices that can supply single or multiple point-of-use fixtures, addressing temperature regulation and maximum temperature limiting of the hot water supplying the fixture(s).

Recognition is made of the time volunteered by members of this working group and of the support of the manufacturers who also participated in the meetings for this standard.

The standard does not imply ASSE's endorsement of a product which conforms with these requirements.

Compliance with this standard does not imply acceptance by any code body.

It is recommended that these devices be installed consistent with local codes.

This standard was promulgated in accordance with procedures developed by the American National Standards Institute (ANSI).

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Water Temperature Limiting Devices

Section I

1.0 General

1.1 Application

Water Temperature Limiting Devices (herein referred to as the “device”) shall control and limit the water temperature to fittings for fixtures such as sinks, lavatories or bathtubs and are intended to reduce the risk of scalding.

1.2 Scope

1.2.1 Description

These devices are intended to supply tempered water to plumbing fixture fittings, or be integral with plumbing fixture fittings supplying tempered water. The device shall be equipped with an adjustable and lockable means to limit the setting of the device towards the hot position. Where the device is integral to the fixture fitting, it shall comply with the requirements of ASME A112.18.1.

1.2.2 Flow Range

The manufacturer shall designate the minimum and maximum flow rate and pressure drop of devices other than those designed into fixture fittings. The flow rates for devices designed into fixture fittings shall be in accordance with ASME A112.18.1.

1.2.3 Working Pressure

The device shall be designed to function at a maximum working pressure of not less than 125.0 psi (861.8 kPa).

1.2.4 Temperature Range

The device shall be designed with an adjustable outlet temperature that shall include the range 105.0 °F to 110.0 °F (40.6 °C to 43.3 °C). The device shall operate with inlet cold water temperatures 39.0 °F to 80.0 °F (3.9 °C to 26.7 °C) and with inlet hot water temperatures 120.0 °F to 180.0 °F (48.9 °C to 82.2 °C).

1.2.5 Cross Flow

The device shall include a means of preventing cross flow when tested in accordance with Section 3.7.

1.3 Reference Documents

Referenced industry standards shall be the latest edition.