

Standard Consumer Safety Specification for Lighters¹

This standard is issued under the fixed designation F 400; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This consumer safety specification covers all flame-producing consumer products commonly known as cigarette lighters, pipe lighters, and cigar lighters and such similar devices as defined in 2.1.7. Matches are specifically excluded from this safety specification; flame-producing products intended solely for igniting apparatus other than cigars, pipes, and cigarettes are also specifically excluded from this safety specification. Lighters are specifically not intended for use as a candle, flashlight, or for other uses requiring an extended burn time.

1.2 This specification establishes requirements for lighters to ensure a reasonable degree of safety for normal use or reasonably foreseeable misuse of such lighters by users.

1.3 Lighters, being flame-producing devices, can, as do all flame sources, present a potential hazard to the consumer. This specification cannot eliminate all hazards, but is intended to minimize potential hazards of lighters to users.

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 The following precautionary caveat pertains only to the test methods portion, Section 7, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Terminology

2.1 Definitions of Terms Specific to This Standard:

2.1.1 *burner valve*—the component of a gas lighter that controls the release of fuel.

2.1.2 *burner valve orifice*—the tip of the burner valve from which fuel is released.

2.1.3 *flame*—the result of combustion of fuel that produces heat and often light which could be visible or non-visible with the naked eye under normal lighting conditions.

2.1.4 *flame height*—a linear distance from the tip of the visible flame to the top of the shield or, in the absence of a shield, from the tip of the visible flame to the top of the wick or burner valve orifice.

2.1.4.1 *Discussion*—Flame heights shall be measured in accordance with 7.1.

2.1.5 *flaring*—a variance of flame height from the steady-state flame condition.

2.1.6 *ignite*—to produce a flame with a lighter by activating the self-contained ignition and fuel release systems of that lighter in the intended manner.

2.1.7 *lighter*—a manually operated flame-producing device employing a petrochemical derivative as a fuel. It is normally used for deliberately igniting cigarettes, pipes, and cigars, and may foreseeably be used to ignite materials such as paper, wicks, candles, and lanterns.

2.1.8 *lighter, adjustable*—a lighter that is received by the consumer with a mechanism for the user to vary the height of the flame manually.

2.1.9 *lighter, automatic adjusting pipe*—a lighter designed and merchandised specifically for the purpose of lighting pipes and characterized by an automatic increase in flame height when tilted from an upright position.

2.1.10 *lighter, disposable*—a lighter that is received by the user with a supply of fuel and that is not intended to be refueled.

2.1.11 *lighter, fluid*—a lighter that utilizes a hexane-type fluid such as petrol or naphtha whose vapor pressure at 24°C (75°F) does not exceed a gage pressure of 34 kPa (5 psi).

2.1.12 *lighter, gas*—a lighter that utilizes a butane, isobutane, propane, or other liquefied hydrocarbon mixture whose vapor pressure at 24°C (75°F) exceeds a gage pressure of 103 kPa (15 psi).

2.1.13 *lighter, nonadjustable*—a lighter that has a flame height preset by the manufacturer and is not provided with a mechanism to adjust the flame height.

2.1.14 *lighter, non-self-extinguishing*—a lighter that, once ignited, does not require intentional or positive action by the user to maintain a flame and requires a subsequent, deliberate user action to extinguish the flame.

2.1.15 *lighter, postmixing burner*—a gas lighter in which fuel and air is mixed at the point of combustion.

2.1.16 *lighter, premixing burner*—a gas lighter in which fuel and air is mixed before being supplied for combustion.

¹ This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.02 on Safety Standards for Lighters.

Current edition approved Sept. 10, 2000; Published December 2000. Originally published as F 400 – 75. Last previous edition F 400 – 97.