

**BEFORE THE
U.S. CONSUMER PRODUCT SAFETY COMMISSION**

**PETITION REQUESTING THAT ASTM F400-00, SAFETY STANDARD
FOR LIGHTERS, BE ADOPTED
AS A CONSUMER PRODUCT SAFETY STANDARD
UNDER SECTIONS 7 AND 9
OF THE CONSUMER PRODUCT SAFETY ACT**

**PETITION OF
LIGHTER ASSOCIATION, INC.**

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INTRODUCTION

Pursuant to Sections 7 and 9 of the Consumer Product Safety Act (“CPSA”), 15 U.S.C. Sections 2056 and 2058, and the U.S. Consumer Product Safety Commission (“Commission”) regulations issued thereunder at 16 C.F.R. Part 1051.5 (2000), the Lighter Association, Inc. files this petition requesting that ASTM F400-00, Safety Standard for Lighters, be adopted as a consumer product safety standard under the CPSA. See Exhibit A. In support of this request, the Lighter Association, Inc. submits the following information.

The Lighter Association, Inc. (“Association” or “petitioner” herein) is the national trade association of the lighter industry.¹ Its members include all of the major U.S. manufacturers and distributors of lighters doing business in this country. A conservative estimate is that the

¹ The Lighter Association, Inc. is located at 1920 N Street, N. W., Washington, D.C. 20036.

Association represents approximately 60% of the total lighter market in the U.S. The Association has regularly appeared before this Commission since the Association's formation in 1986.

The Association is making the somewhat unusual request that a voluntary consensus standard be adopted as a mandatory standard under the CPSA because of its concern that unreasonable risks of injury are being created by failure to enforce the existing voluntary standard in the U.S. The background of this issue is that the ASTM Standard has the force and effect of law in Canada (Hazardous Products (Lighters) Regulations, SOR/89-514, P.C. 1989-2151, amended by SOR/91-261, P.C. 1995-827)² and in Mexico (NOM-090-SCFI-1994). Because, however, ASTM F400-00 is merely a voluntary standard in the U.S., and the Commission does not have the authority to enforce the standard, millions of lighters which fail to comply with the standard are dumped in the U.S. market every week. Indeed, Health Canada's Warning last year regarding the safety of certain disposable lighters for failure to meet the ASTM standard has recently resulted in millions of these lighters being redirected to the U.S. market. See Health Canada press release, attached as Exhibit C. The European market has experienced similar problems. See Report on EU testing of disposable lighters, attached as Exhibit D. As a result, a significant percentage of lighters imported into the U.S. now fail to meet such minimum standards as drop tests, leakage tests, pressure tests, etc.

The irony of the situation is that most disposable lighters imported into the U.S. are now child-resistant, in compliance with the CPSC child resistancy standard (16 C.F.R. Part 1210 (2000)), but do not meet general minimum safety standards followed by the U.S. lighter industry since adoption of the ASTM F400 Standard in 1975. The purpose of this petition is to end the

² See Exhibit B.

disparity of safety regulation by our North American trading partners, but no safety regulation by the U.S. government.

Indeed, the United States and Canada have agreed to coordinate standard-setting activities. A 1993 Memorandum of Understanding between the CPSC and the Product Safety Branch of Canada (“PSB”) sets forth the working relationship between the CPSC and the PSB in carrying out the goals of the Free Trade Agreement between the two countries. The Memorandum of Understanding states in relevant part, "To the greatest extent possible, and taking into account international standardization activities, each Party shall make compatible its standards-related measures and procedures for product approval with those of the other Party." (Memorandum of Understanding between the Consumer Product Safety Commission and the Product Safety Branch, Bureau of Consumer Affairs, Department of Consumer and Corporate Affairs Canada, June 21, 1993). Harmonizing the United States' standard with that of Canada and Mexico will also further the U.S. commitment under Article 906, Section 2 of the North American Free Trade Agreement which provides that "Parties shall, to the greatest extent practicable, make compatible their respective standards-related measures, so as to facilitate trade in a good or service between the Parties." See Exhibit E.

The goal of the petition is to have the Commission issue the ASTM Standard for lighters as a performance standard so as to reduce the overall risk of injury from lighters nationwide. The Association is therefore requesting that the Commission institute a rulemaking to make ASTM F400-00 a consumer product safety standard under Sections 7 and 9 of the CPSA. A copy of the text of ASTM F400-00 is attached to this petition.³

³ See Exhibit A.

PETITION REQUIREMENTS UNDER 16 C.F.R. PART 1051.5(b)

Consistent with 16 C.F.R. Part 1051.5(b), petitioner submits the following information in support of the petition:

Part 1051.5(b)(1): Describe the specific risks of injury to which the petition is addressed, including the degree (severity) and the nature of the risk(s) of injury associated with the product and the possible reasons for the existence of the risk of injury.

The specific risks of injury to which this petition is addressed include fire, cut, and burn hazards. The degree or severity of injury varies with the particular incident. The Association believes that the existence of these risks of injury stems from a failure to enforce the existing voluntary standard in the United States. The discussion below shows the lack of compliance with voluntary ASTM Standard F400-00 of many of the lighters imported into the U.S. and the consequent risks presented.

Part 1051.5(b)(3): Supply or reference any known documentation, engineering studies, technical studies, reports of injuries, medical findings, legal analyses, economic analyses and environmental impact analyses relating to the petition.

The numerous incident reports and CPSC recalls referenced herein evidence the lack of compliance with the current voluntary standard for cigarette lighters; such lack of compliance has resulted in an increased risk of injury. Following is an analysis which categorizes the incidents according to the individual sections of voluntary ASTM Standard F400-00, requirements to which many lighters imported from the Far East, and in particular, China, fail to adhere.⁴

⁴ For ease of reference, the reports have been numbered and are attached at Exhibit F.

A. CPSC In-Depth Investigation Reports and Documents

Flame Control and Flame Height Adjustment:

Burns or property damage from fire may result from improper flame height⁵ or flame height adjustment.⁶ In Report 1 (001107CCC0071), for example, the claimant indicated that the flame height on the disposable cigarette lighter was extremely high, and that even after the flame height mechanism was adjusted downward to the lowest setting the flame remained too high. In Report 2 (990715CCN0268), an eight-inch flame allegedly came out of the lighter when the lighter was ignited. In Report 3 (C001 0155A), a five to six-inch flame allegedly came out of the lighter upon its first ignition; there was reportedly no way to change the height of the flame. See also Report 4 (H9840005A). Report 5 (H9790247A) reports that the fixed-flame lighter periodically flared up to 2 1/2" high during use. In Report 6 (H97A0161A), a three to four-inch flame allegedly came from the cigarette lighter; when the complainant tried to adjust the flame, the whole lighter allegedly ignited into a 12" high flame. These lighters had flame heights in violation of ASTM F400-00.

Spitting, Sputtering or Flaring:

Spitting, sputtering, or flaring of a flame could result in burns or property damage.⁷ Report 5 (H9790247A) reports that the fixed-flame lighter periodically flared up to 2 1/2" high during use. In Report 7 (990728CWE5021), complainants reported that while attempting to ignite a flame, sparks flew off several lighters.

⁵ Section 3.2 of ASTM F400-00 provides that the maximum attainable flame height for lighters shall be limited with a setting or by product design, or both. Section 3.2 further provides that for adjustable flame-height lighters, the maximum flame height that a consumer will obtain on first striking the lighter without adjustment shall also be limited.

⁶ Section 3.3 of ASTM F400-00 provides that adjustable flame height lighters shall require a deliberate action on the part of the user to increase the flame height when the lighter is used in a normal fashion.

⁷ Section 3.4 of ASTM F400-00 provides that gas lighters when set at the maximum flame height shall exhibit no spitting, sputtering, or flaring.

Flame Extinction:

Burns or property damage may also result from the failure of a lighter's flame to properly extinguish.⁸ Such was reportedly the case in Report 7 (990728CWE5021), Report 8 (980526CCC3834), Report 9 (000707CNE5648), Report 10 (960809CCC54'0), Report 11 (H9720118A), Report 12 (H9760258A), and Report 13 (C9650009).

Drop:

Burns or cuts to the person or unintentional fires may result from lighters that are unable to stay intact after being dropped.⁹ For example, in Report 1 (001107CCC0071), the lighter allegedly dropped approximately three feet to a concrete step and exploded. Also, in Report 14 (000728CNE5684), a lighter allegedly shattered into pieces after being tossed on a car seat next to the passenger. In Report 15 (000616HNE5605), a lighter allegedly fell about two feet and exploded on impact.

Burning:

Burns or cuts to the person or unintentional fires may result from lighters that are unable to withstand a burning time for a designated period of time without evidence of any burning or distortion of components.¹⁰ In Report 16 (001031CWE5665), an examination of the lighter after it spontaneously exploded reportedly showed that fire or heat had melted the top plastic cover of the lighter. In Report 13 (C9650009), the lighter allegedly continued to ignite after complainant

⁸ Section 7.3 of ASTM F400-00 provides a specific test to ensure that lighters extinguish safely.

⁹ Section 7.4 of ASTM F400-00 provides a test to determine if dropping a gas lighter onto a hard surface will result in fuel reservoir fragmentation, sustained self-ignition, gas escape exceeding 15mg/min, or impair subsequent operation in a safe manner. Section 7.4 also provides a test to determine if dropping a fluid lighter onto a hard surface will result in fuel reservoir rupture, sustained self-ignition, or impair subsequent operation in a safe manner.

¹⁰ Section 4.4 of ASTM F400-00, the Burning Test, requires that adjustable gas lighters with the flame height set at maximum, and nonadjustable gas lighters at their permanently set flame heights, or fluid-type lighters shall be capable of withstanding a burning time of 5 s in any hand-held attitude without evidence of any burning or distortion of components so as to cause a hazardous condition.

released the lighter's lever, and flames reportedly then began to escape from the seam around the lever. These lighters showed signs of distortion of their components, in contravention of section 4.4 of ASTM F400-00.

Temperature:

Burns and cuts to the person and unintentional fires are risks associated with the inability of fuel reservoirs on lighters to withstand elevated temperatures.¹¹ This is most apparent in situations in which lighters are left in cars, particularly when in direct sunlight. For example, in Report 17 (000908CNE5748), a disposable lighter was placed in the armrest of a car; the car reportedly caught fire shortly thereafter. In Report 18 (001106CCC2078), an individual left a disposable butane cigarette lighter in the car; when the individual returned to the car at the end of the day, it was reported that the lighter had exploded, sending small pieces of plastic throughout the vehicle. In Report 19 (H0060245A) a lighter was allegedly found, exploded, in an ashtray, with shattered pieces of hard plastic. The report indicates that it was "probably a hot day." In Report 20 (H0070063A), a lighter exposed to a temperature of approximately 85 degrees reportedly shattered into many small pieces. Report 21 (H0070088A) indicates that a lighter in an open console in a car with windows down in 70 degree weather exploded. Report 22 (H0070267A) involved a lighter which allegedly had shattered after 2-3 hours in a consumer's car in 80 degree weather. Report 23 (H00B0251A), in which a lighter allegedly exploded in the individual's pocket, indicated that the "lighter may have been exposed to direct sunlight." Each of these lighters appeared to have exploded due to a failure to withstand elevated temperatures. The concomitant risks of injury were unintentional fires, cuts and burns.

¹¹ Section 4.3 of ASTM F400-00, the Temperature Test, requires that lighters be capable of withstanding a temperature of 55 degrees Celsius for four hours when tested in accordance with section 7.5 of ASTM F400-00.

Pressure or Volumetric Displacement:

A lighter whose liquid portion of its fuel exceeds 85% of the volumetric capacity of the fuel reservoir¹² or a lighter that fails to adequately withstand internal pressure without rupture¹³ may cause burns, cuts, or property damage. In Report 24 (960820CWE5017/1604), a lighter allegedly caught fire while lying on a table, minutes after use. A second lighter allegedly exploded without notice. Report 25 (980903CCN0406) indicates that the control mechanism of the disposable lighter blew off, spewing the contents on the operator. In Report 26 (000301CCC0450), a novelty lighter shaped like a cell phone allegedly made a "popping" noise and leaked butane. In Report 27 (970115CCN0276), it is alleged that about twenty minutes after the consumer placed a lighter on a dresser after use, 3 foot-high flames erupted from the top of the dresser. Similar incidents allegedly occurred in Report 16 (001031CWE5665), Report 18 (001106CCC2078), Report 19 (H0060245A), Report 20 (H0070063A), Report 23 (H00B0251A), Report 28 (980414CCN0245), Report 29 (971219CCN0099), Report 30 (000607HCN0279), Report 31 (000731CCN0378), Report 32 (990603CCC5482), Report 33 (980609CCN0301), Report 34 (I0050096), Report 35 (I0060251), Report 36 (I0070158), Report 37 (H00100333A), Report 38 (H0040308A), Report 39 (H0050255A), Report 40 (H0050186A), Report 42 (C5C0017), Report 43 (H9660285A), and Report 44 (990604CCC2485). In each of these instances, a failure to conform to the pressure or volumetric displacement requirements of ASTM F400-00 may very likely have been the cause of the spontaneous rupture, fire or explosion.

¹² Section 3.6 of ASTM F400-00 provides that the liquid portion of the fuel in gas lighters shipped with fuel shall not exceed 85% of the volumetric capacity of the fuel chamber when tested in accordance with section 7.14 of ASTM F400-00.

¹³ Section 4.9 of ASTM F400-00 provides that gas lighters shall be capable of withstanding an internal pressure of two times the vapor pressure occurring at 55 degrees Celsius of the fuel recommended by the manufacturer when tested in accordance with ASTM F400-00 section 7.10.

Refilling:

Burns, cuts, or unintentional fires may also result from lighters with lighter sealing closures or fuel reservoirs which have fuel leakage or from which an inordinate amount of gas escapes.¹⁴ In Report 45 (000301CCC2337), after a consumer used isopropyl alcohol to remove glue residue left on a refillable butane cigarette lighter, the plastic case allegedly started to crack and leak. In Report 46 (970314CCC2013), claimant was refilling a butane cigarette lighter; the report indicates that the butane either leaked or spilled, and a fire allegedly resulted after the individual flicked the lighter. Similar incidents reportedly occurred in Report 6 (H97A0161A), Report 41 (H9760042A), and Report 47 (980313CCC2401). In Report 48 (H0060334A), lighter fluid reportedly leaked through a crack in the lighter, causing the claimant's hand to catch on fire when the lighter was ignited. (See also Report 14 (000728CNE5684) and Report 49 (X9763106)). In Report 50 (961017CCC5727), a disposable cigarette lighter allegedly began emitting gas before the individual pressed the lever (See also Report 21 (H0070088A) and Report 51 (I9920139)). These lighters clearly failed to conform to the leakage tests found in sections 7.11 and 7.13 of ASTM F400-00.

B. CPSC Recalls

The failure of lighters to conform to ASTM F400-00 as well as the accompanying dangers associated with this nonconformity are evident in the numerous recalls listed on the CPSC's website:¹⁵

¹⁴ Section 5.2 of ASTM F400-00 provides that refillable fluid lighters having a sealed fuel reservoir shall be free of fuel leakage from both the sealed reservoir and the sealing closure when tested in accordance with ASTM F400-00 section 7.11. Section 5.4 of ASTM F400-00 provides that the refilling valve in a pressurized fuel reservoir lighter shall be secure enough so as not to allow an escape of gas exceeding 15 mg/min when tested in accordance with ASTM F400-00 section 7.13.

¹⁵ The CPSC recalls referenced herein are attached as Exhibit G.

- In November 1995, the CPSC and New York Lighter Co. recalled about 50,000 disposable cigarette lighters which failed to extinguish after use and could flare-up during use.
- In September 2000, the CPSC and Halpern Import Co. recalled about 350,000 disposable cigarette lighters which could burn with a high flame and fail to extinguish, presenting fire and burn hazards.

Clearly these lighters were in violation of flame generation and flame extinguishment requirements as found in ASTM Standard F400-00.

Recalls also evidence a failure of lighters to conform to the non-leakage requirement as found in voluntary ASTM Standard F400-00. In October 1999, for example, the CPSC and Shine International Trading Co. recalled about 2.4 million cigarette lighters, which could leak fuel and remain on after consumers had used them. Clearly these lighters did not conform to the fuel reservoir leakage test provided in section 7.11 of ASTM F400-00.

C. Health Canada Warning and Recalls

Safety concerns about disposable lighters from China were also raised by Health Canada in a Warning issued on October 27, 2000. In that Warning (See Exhibit C), Health Canada noted that certain brands of lighters from China, intended for the U.S. market, were being illegally entered into Canada at border crossings. The Warning specifically noted:

These lighters present fire, injury and burn hazards because they have been known to explode or leak gas when dropped; continue to burn when the trigger is released; explode or leak gas when exposed to heat; and have excessive flame heights.

The Warning then listed some twenty brands of Chinese lighters commonly sold in the U.S. that exhibited these tendencies. Ironically, these lighters are prohibited entry into Canada under Canadian law, but are routinely sold in the U.S.

The following lighters imported from China into Canada were also denied entry into Canada unless and until the importer(s) provided proof of compliance with the Hazardous Products (Lighters) Regulations:

- Push-N-Lite disposable lighters were denied entry because they were prone to excessive flame height, sputtering of fuel from the jet, failure of the flame to extinguish promptly after the lever was released, and release of fuel from the lighter when dropped;
- Comet lighters were denied entry because they released fuel when dropped;
- CLI-CLA, Turbo Jet, J.G. Seaoverload, Frupi, ZPC Tiger Brand, GLP, American Light, A/M, City Lites, Classic Gold, Everglide, Fupi, GQ, Janmor, and Litz, were all denied entry because each had a 100% failure rate in meeting the performance tests set out in the Hazardous Products (Lighters) Regulations when sampled.

Other recalls of Canadian lighters implemented by Health Canada include:

- Best brand lighters, which were found to burn long after the lever was released to extinguish the flame, and explode when exposed to high temperatures;
- Cig brand lighters, which were found to burn long after the lever was released to extinguish the flame, have excessive flame height, and release fuel when dropped and burst into flames; and
- Harry brand lighters, which were found to explode when exposed to high temperatures.¹⁶

¹⁶ See Exhibit H.

Consumers were asked to stop using the lighters immediately and dispose of them in accordance with local laws. Retailers were asked to immediately remove these lighters from sale and contact the nearest Product Safety Bureau office for further direction.

D. European Testing of Disposable Lighters

Similar safety concerns about disposable lighters have been raised in the European marketplace. As Exhibit D indicates, the European Federation of Lighter Manufacturers ordered random testing of disposable lighters in the European market to survey conformity with ISO 9994 (the international lighter safety standard which is virtually identical to the ASTM F400-00 standard). As Exhibit D indicates, the majority of lighters tested failed to meet either functional requirements or structural integrity requirements set forth in the ISO/ASTM standards. In several instances, the tests were discontinued because the flame heights were so high the tests could not be safely carried out. The vast majority of these lighters were from China and were the very brands listed by Health Canada in its Warning, or were knock-offs of Lighter Association member products (e.g., false Tokai). An interesting observation about these third party tests is that virtually every lighter from China failed one or more of the tests. Many of them failed all of the ISO/ASTM standards. Ultimately, many of these lighters found their way into the U.S. market where there is no enforcement of the ASTM or ISO standards.

CONCLUSION

As is clear from the foregoing evidence, there is essentially no regulation of the general safety of disposable lighters in the U.S. We have the ironic situation that the U.S. has a comprehensive scheme of regulation for child resistancy of lighters, yet basic safety issues are ignored by regulation. Moreover, our trading partners to the North and South have long ago established general safety standards for cigarette lighters. There has also been significant testing of imported lighters from China in the European market, resulting in massive failures under the general international safety standard. Many of these rejected or failed lighters then find their way into the U.S. marketplace.

The Lighter Association Inc. respectfully requests that this petition be docketed for public comment. In addition, we urge the Commission to publish the ASTM F400-00 Standard as a proposed rule and move rapidly towards issuance of the standard as a final rule under the Consumer Product Safety Act.

Respectfully submitted,

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Dated: November 27, 2001

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