

**Petition CP 02-1, Petition on Lighters**

**Public Meeting Concerning Petition Requesting that ASTM  
F400-00, Safety Standard for Lighters, Be Adopted as a  
Consumer Product Safety Standard**

**Testimony of Lighter Association, Inc., Petitioner**

**By David H. Baker, General Counsel**

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My name is David H. Baker and I serve as General Counsel to the Lighter Association, Inc., a trade association composed of U.S. based manufacturers and distributors of lighters. We are the Petitioner in this proceeding.

We greatly appreciate the opportunity to testify in this proceeding. We commend the Commission for this new policy of opening Briefing Conferences up to testimony from interested parties. In addition to presenting our testimony today, we would welcome any questions that the Commissioners may have regarding our Petition.

The Lighter Association strongly supports this Petition and believes that many lives can be saved, and hundreds of injuries can be prevented, by the granting of this Petition and the establishment of a mandatory standard based upon ASTM F400-00.

For the benefit of those unfamiliar with ASTM F400, it is a consensus standard that sets forth basic safety requirements for all lighters, with the exception of multi-purpose lighters, which are covered by a similar safety standard, ASTM F2201-02. Issues covered by ASTM F400 include flame height, flame spitting or sputtering or flaring, flame extinction, a drop test, an elevated temperature test, a continuous burn test, a pressure test, a volumetric fill requirement and labeling requirements. See Petition at Exhibit A for a complete version of ASTM F400-00.

As further background, in November of 2001, when we filed the Petition under consideration herein, our members, who all voluntarily comply with the consensus standard, accounted for approximately 60% of the lighters sold in this country. Today, less than three years later, our members account for less than half of the lighters sold in this country. By the end of 2003, well over half of the lighters sold in the U.S. were imported, with the majority of the imports being low priced disposable and refillable lighters from China.

I make this point at the outset, because on the very first page of the Executive Summary, the staff suggests "that at least 75% of the lighters sold in the U.S. are purported to conform to ASTM F-400." Executive Summary at ii. The suggestion here is that there is already substantial compliance with ASTM F400, thus eliminating any need for a mandatory standard. THIS IS INCORRECT. Based upon the Lighter Association annual statistical program, total lighter sales in the U.S. are approximately one billion units a year. Lighter Association members now account for about 45% of those lighters, or 450 million units at best. All of our members comply with ASTM F400. The staff then states that lighters from Polycity Enterprises, Limited and New York Lighter account for an additional 125 million lighters and concludes that these lighters also meet the requirements of the voluntary standard. Charles L. Smith Memorandum at 2. THIS IS ALSO INCORRECT. Lighters from these two companies are the very same lighters that have been banned by Health Canada, failed tests in Europe and have failed tests conducted by ACTS in Buffalo, New York. To summarily conclude that these lighters are in compliance with the ASTM F400 standard is contrary to all of the evidence of record.

Based upon Lighter Association testing, most brands of lighters imported from China (other than our members' products from China) routinely fail several of the basic safety standards set forth in ASTM F400. See our Reply Comments filed November 19, 2002 demonstrating that Roll-N-Lite, Spin-N-Lite, SUNLITE, Lite-Up, GIL Lighters, Touch-Lite, Liberty Lites, Snap Lite, New York Lighters, Strike'N Lite and Wax Lighters all failed some of the key safety standards in ASTM F400 including excessive flame height, spitting or sputtering or flaring flame, failure to extinguish, excessive volumetric fill, drop test, etc.

For some reason, it appears that our Reply Comments of November 19, 2002 were never placed in the official docket, until late last month, when I discovered this omission and faxed an additional copy to Secretary Stevenson. There is no reference to the Reply Comments, or to the ACTS testing in the staff's Executive Summary. However, it is referred to once in the Memorandum from Jacqueline Elder to the Commission so it is apparently of record. Elder Memorandum at 2.

Similarly, our Supplemental Comments of August 26, 2003, pointing out that in 2003 Health Canada HAD AGAIN BANNED ENTRY OF LIGHTERS FROM CHINA (including Polycity and New York Lighter products) are not included in the record. In those comments, we also pointed out that the alleged testing of lighters in China cited to by SLAI, was postponed from the original start date represented to the Commission. Based upon our members' experiences in China, and the ACTS testing of lighters from China, we have serious question whether these laboratories are ever used.

We would urge the Commission to review the entire record, including the documents referenced above and, in particular, the testing conducted by ACTS, prior to making a decision in this docket. It is the Association's view that less than half of the lighters sold in the U.S. meet all of the safety provisions in the ASTM standard.

The purpose of the Petition was to try and ensure that all lighters sold in the U.S. meet these basic safety standards. In meetings with CPSC Compliance and General Counsel staff in 2000, we were told that the Commission could not enforce the ASTM F400 standard under Section 15 of the Consumer Product Safety Act ("CPSA") because it was merely a voluntary standard. They noted that the exception to this rule might be a violation that created a hazard so great that it rose to the level of a substantial product hazard. However, they highlighted the extreme difficulty in making a case under Section 15 based upon a voluntary standard. They also noted that with the Commission's limited resources, enforcement of regulated products came first. We were then encouraged to file a Petition for rulemaking under Sections 7 and 9 of the CPSA so as to establish a rule that could be enforced under the Commission's Regulated Products jurisdiction.

When we filed the Petition on November 27, 2001, we had no idea that we would be encountering such a lengthy process. At that time, both Canada and Mexico had already adopted the ASTM standard as a mandatory regulation. In April of this year, the 25 member countries of the European Union also adopted ISO Standard 9994, which is nearly identical to ASTM F400, as a EU standard which is to be enforced under the new General Product Safety Directive. EU 2004/C 100/04. Meanwhile, Health Canada increased its enforcement of their lighter standard, issuing several bans of lighters from China. As a result of all of this increased enforcement activity, increasingly, the banned, rejected, unsafe lighters are being directed to the one major, unregulated market, the United States.

It is ironic that the U.S., one of the most safety oriented countries in the world, has ignored the issue of general lighter safety, and has become the dumping ground for unsafe lighters. As noted by the U.S. Department of Transportation in their recent rulemaking notice, "Although the CPSC approves lighter designs solely for child-safety compliance, product recalls are the only mechanism that they have to remove defective consumer products from the marketplace." 69 Fed. Reg. 50976 (2004). As the Commission knows, CPSC recalls of lighters generally involve child resistancy ("CR") violations, not violations of general safety standards. This is because the CR standards are mandatory standards. We applaud the Commission's efforts in enforcing these mandatory standards. If the ASTM general safety standard were also a mandatory standard, the Commission would be empowered to recall millions of other unsafe lighters. As it stands now, these unsafe lighters continue to enter the U.S. market.

The Department of Transportation also specifically noted: "We are concerned that these defective designs identified by CPSC could fail in transportation with potentially catastrophic results." 69 Fed. Reg. 50976 (2004). We are working with the Department of Transportation on their rulemaking pertaining to the safety of lighters in transportation. However, as noted above, the ambit of their investigation will be limited to transportation issues. There are still other important provisions in the ASTM standard, such as flame height, flaring, spitting and sputtering, flame extinction, the continuous burn test and the drop test, which will not be covered in their rule. We make this point because we wish to highlight that even if the DOT rule is adopted, there is still a need for a mandatory CPSC standard at the consumer level.

When we individually met with the three sitting Commissioners on our Petition in March of 2003, we were asked whether in fact this was really a commercial issue. In other words, was the U.S. Lighter Association simply "China bashing" to protect the U.S. manufacturing base. The answer then and now is a resounding "NO". Virtually all of our members manufacture product in China, or purchase product from Chinese factories. Any one in the consumer products business today has to deal with the reality of off shore manufacture. This Petition is not against the Chinese, it is against unsafe lighters sold to U.S. consumers. As we explained to at least one Commissioner at the time, when someone is injured or killed from a malfunctioning lighter, the image of the entire lighter industry suffers. Moreover, it is not the manufacturer or importer of Chinese lighters that is sued, but rather a BIC, a Scripto-Tokai, a Swedish Match, etc. – a company with a presence in the U.S. and significant assets.

Our members have defended over 200 lawsuits since the Commission began considering lighter regulation in 1986. In many of these cases, the lighter at issue is from China. However, neither the manufacturer nor the importer is sued, because they can not be found. As General Counsel of the Lighter Association, I regularly receive calls from plaintiffs, or plaintiffs' counsel, seeking to identify the importers of many of the failed brands tested by ACTS and banned by Canada.

Finally, it is unclear to us why the staff is opposed to regulating in this area. All but one of the comments filed SUPPORTED THE PETITION. The one comment in opposition to the Petition (Zreative Products) confused the CR regulations with the issue of general safety standards for lighters. New York Lighter and Polycity, in their comments on the Lighter Association Petition, noted that they too had filed a Petition with the Commission on May 1, 2000 requesting that ATSM F400 be made into a mandatory standard. We are unaware of the disposition of this Petition.

From the perspective of the Association, with the exception of Zreative Products, all of the other comments filed strongly supported the Petition, including comments from National Safe Kids, TNT Marketing and Michael T. Bogumill, the former CPSC Compliance Officer for Lighters. In the words of Mr. Bogumill, who dealt with this issue longer than any other compliance officer at the Commission, and examined thousands of imported lighters:

"Many cheap lighters imported from 1993-2000 could not meet the drop test requirements of the voluntary standard, exhibited spitting and sputtering of fuel when activated, leaked fuel, could not withstand exposure to high or low temperature conditions without malfunctioning, and exhibited erratic flame heights."

We would urge the Commission to carefully review Mr. Bogumill's comment and all of the other comments in the docket. Without question, the comments filed strongly support the establishment of mandatory safety standards for lighters.

In the Executive Summary, the staff concludes:

“While CPSC staff considers the available information insufficient to begin a rulemaking proceeding, the staff recognizes the merits of the voluntary standard, ASTM F-400, and believe that conformance to this standard could address potential injuries associated with lighter mechanical malfunctions. Therefore, the CPSC staff also recommends that the Commission direct the Office of Compliance to send a letter to all known lighter manufacturers and importers urging them to comply with ASTM F-400 as well as the mandatory standard for child resistance.” Page iii of Executive Summary.

The Lighter Association has two comments on the staff’s conclusion. First, if the staff believes that sending a letter to a manufacturer in China, who essentially is outside the CPSC’s jurisdiction, will have an impact on their behavior, this is a rather naïve position. Second, it appears from the staff recommendation that they know that these same importers still do not comply with the MANDATORY child resistancy standard (Parts 1210 and 1212). What makes staff think that a letter will cause them to comply with a VOLUNTARY standard?

The other troubling aspect of the staff report is their acknowledgement that over the six year period, 1994-1999, according to the NFIRS data base, there were an estimated 330 fires caused by lighter malfunctions, including 90 INJURIES and 10 DEATHS. There is other independent statistical information in their report confirming that over the same period the CPSC has received 256 incident reports related to cigarette lighter malfunctions, leading to 3 deaths and 6 serious injuries.

Even more compelling, in the Federal Register Notice for this Briefing Conference, the staff states:

“For the approximately 900 million lighters purchased by consumers in a year, the estimated risk of death from lighter malfunction is about 2.2 deaths per billion lighters. The estimated risk of injury is about 1.1 injuries per million lighters.” 69 Fed. Reg. 50364 (2004)

On this basis, the staff recommends against proceeding with a mandatory rule.

We know that a billion lighters are sold every year in this country. This means that 2 PEOPLE ARE KILLED EVERY YEAR by malfunctioning lighters. How many deaths will the Commission require to meet the cost benefit test in the statute? Moreover, according to this staff statistic, nearly a 1000 people are injured every year from malfunctioning lighters. How can the Commission ignore this large number of injuries?

We understand that the Commission must justify any rule under the cost benefit analysis in Section 9 of the CPSA. However, since the ASTM F400 standard and its ISO counterpart 9994, are already mandatory in most of the other major markets in the world, it is difficult to believe that the additional cost of meeting this standard in the U.S., is going to be anything more than minimal. The prevention of 2 or 3 deaths every year and 1000 injuries every year clearly should tilt the balance in favor of a mandatory regulation.

Moreover, these statistics will probably become even worse as a result of the recent adoption of the voluntary standard in Europe. As a result, the U.S. will become the target of all of the manufacturers who can no longer sell their products in Europe, thereby increasing the number of unsafe lighters sold in the U.S.

In conclusion, the death and injury data compiled by the CPSC staff is far worse than the Lighter Association believed when it filed its Petition. For an agency that has fire safety as one of its primary goals, we urge the Commission to reject the staff recommendation, grant the Petition and proceed with a rulemaking to protect U.S. consumers from unsafe lighters.

Thank you again for the opportunity to testify today.

A handwritten signature in black ink, consisting of several overlapping loops and a final flourish.

# **Lighter**

## **Association Inc.**

[www.lighterassociation.org](http://www.lighterassociation.org)

September 3, 2004

Mr. Todd A. Stevenson  
Director  
Office of the Secretary  
U.S. Consumer Product Safety Commission  
Room 502  
4330 East-West Highway  
Bethesda, Maryland 20814

**Re: Lighter Petition Briefing**

Dear Mr. Stevenson:

I am enclosing the original and 25 copies of my written testimony in regard to the upcoming Lighter Briefing Conference on September 14<sup>th</sup>.

Please be advised that I wish to make an oral presentation on behalf of the Lighter Association Inc. I will be accompanied by Thomas M. Kelleher, Senior Vice President-Administration, General Counsel & Secretary of the BIC Corporation, who will be available for questions, but will not be making an oral presentation.

If you need any further information from me, please do not hesitate to contact me on my direct line at (202) 973-2709.

I am also enclosing another document which did not appear to be in the index for the docket I reviewed in your office. As appropriate, I would request that you would add it to the Commission docket.

Thank you for your assistance.

Very truly yours,



David H. Baker  
General Counsel

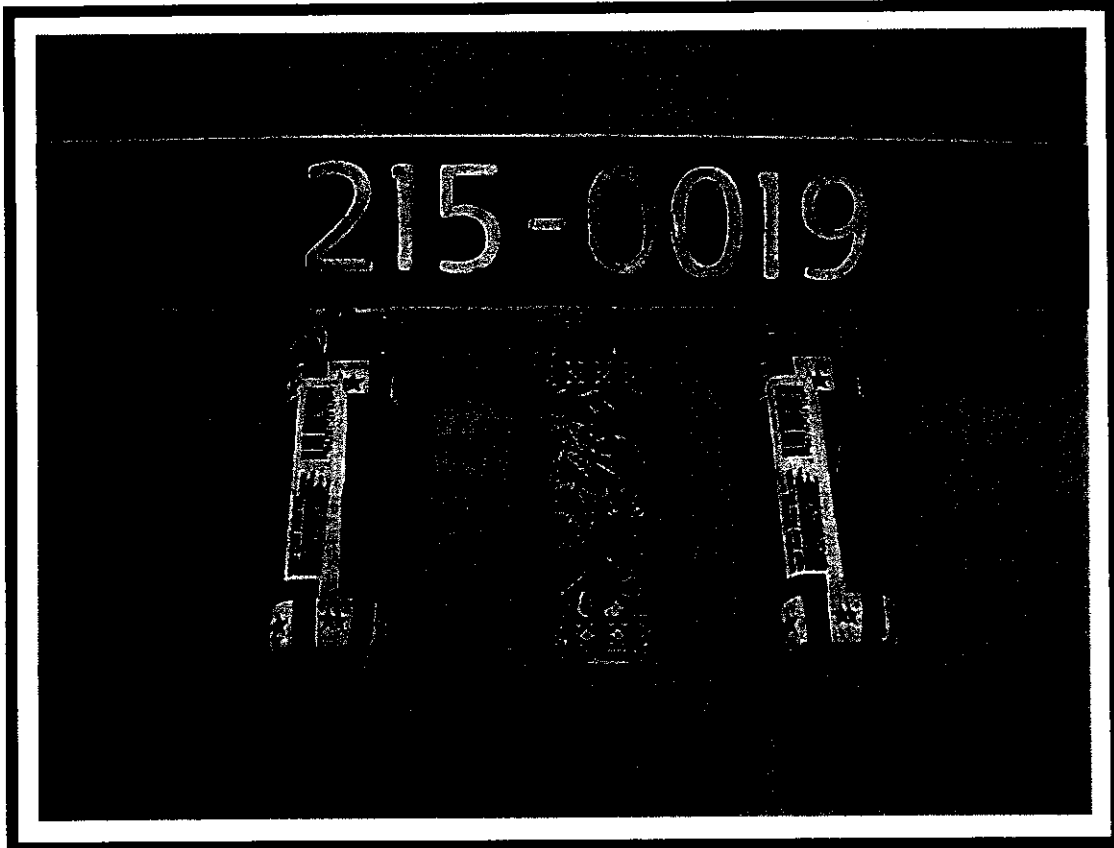
DHB/km

Enclosures  
161203

# REPORT

Lab Number: (5104)215-0019

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Report	3 Pages
Protocol	9 Pages
Exhibits	N/A
Other	N/A



# TEST REPORT

LIGHTER ASSOCIATION, INC.  
 1920 N. STREET, NW  
 WASHINGTON, DC, DISTRICT OF  
 COLUMBIA, 20036 UNITED STATES

LAB LOCATION: BUFFALO -  
 HARDLINES  
 LAB NUMBER: (US) (5104) 215-0019

CLIENT NO.: NOT LISTED  
 DEPARTMENT: NOT LISTED

ATTN: DAVID BAKER

DATE IN: AUGUST 2, 2004  
 DATE OUT: SEPTEMBER 9, 2004  
 MOD. LOG IN: SEPTEMBER 8, 2004  
 WORKING DAYS: 1  
 ADDENDUM DATE: N/A

OVERALL RATING	
PASS	_____
CORRECTIVE ACTION REQUIRED	_____
FAIL	X

TESTING FOR  
 DISPOSABLE LIGHTERS ( ASTM F400 )  
 MC-4085-US

DEVELOPMENT	PRODUCTION	X	CUSTOMER COMPLAINT	OTHER
<b>Sample Description:</b> Touch Lite Lighters				
<b>Final Packaging:</b>		Yes (submitted for review)	X	No (not submitted for review)
<b>Manufacturer:</b>		Not Listed		
<b>Country of Origin:</b>		China	<b>Style:</b>	Not Listed
<b>Color:</b>		Various		<b>SKU Number:</b> Not Listed
<b>Re-test:</b>		Yes:	No: X	<b>Charge Vendor:</b> Yes: No: X
<b>Previous Report No.:</b>		N/A		
<b>Addendum Report:</b>		Yes:	No: X	
<b>Reason For Addendum:</b>		N/A		
TEST PROPERTY	PASS	C.A.R.	FAIL	COMMENTS
Labeling		X		
Physical Characteristics	X			
Construction Qualities			X	
Performance			X	
Analytical				Not Tested

**EXECUTIVE SUMMARY:** At the request of the client, submitted samples were tested per ASTM F400. All sections of the standard were evaluated, except Child Resistance per client request.

The samples provided received a **CORRECTIVE ACTION REQUIRED** rating for the following reason :

**Labeling :**

- Section 6.6.5 – Label states, never expose to heat above 48°C. Requirement – Label must state, “Never expose to heat above 49°C or to prolonged sunlight”.

The samples provided received a **FAIL** rating for the following reasons :

**Construction and Workmanship :**

Defects – Does not meet all tested performance requirements. See Performance below for details.

**Performance :**

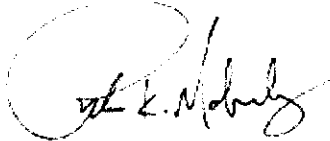
- Section 3.2.3 –Seventeen lighters were capable of producing a flame greater than 4.75”. Requirement –Lighters shall not be capable of producing a flame greater than 4.75” when deliberately adjusted by the consumer.
- Section 3.2.5 – Nine lighters were capable of producing a first strike flame greater than 4”. Requirement – Shall have the flame height adjusted prior to reaching the consumer in such a manner that the lighter, when first struck by the user without changing the adjustment, will not produce a flame height in excess of 100mm (4in.).
- Section 3.4 – Six lighters exhibited flaring greater than 2” (upright position) from the steady flame height. Requirement – Maximum of 2” variation in flame height from the steady – state flame condition. All flaring was observed within the 5 second allotted test time.
- Section 3.5.2 – Three lighters exhibited exposed flame for more than 4 seconds. Requirement – Any exposed flame must completely extinguish within two seconds. An additional 2 seconds is given for lighters with shields.

**RECOMMENDATION FOR IMPROVEMENT:**

- Provide a sample that meets the Labeling requirements.
- Provide a sample that meets the Construction and Workmanship requirements.
- Provide a sample that meets the Performance requirements.

**Note:** Bureau Veritas Consumer Products Services, Inc. randomly purchased samples from various retail sources within a one hundred mile radius of Buffalo, NY. The date code of the item is 45012-SUN.

Bureau Veritas  
Consumer Products Services, Inc.



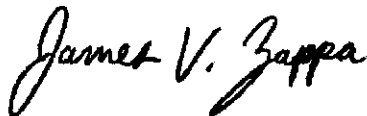
Rufus K. Moberly  
Associate Product Test Engineer,  
Hardlines Department  
Technical Consulting and Support Services

Bureau Veritas  
Consumer Products Services, Inc.



Glenn Sylvia  
V.P. of Hardlines

Bureau Veritas  
Consumer Products Services, Inc.



James V. Zappa  
Product Test Engineer  
Hardlines Department  
Technical Consulting and Support Services

/kni



**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0019  
 Technician Name: DC/NS  
 Test Date: August 2, 2004  
 Reviewed By/Date: RKM - 9/8/04

**BUREAU VERITAS TEST PROTOCOL FOR  
MC-4085-US**

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>LABELING</b>					
Instructions and Warnings	ASTM F400-00, Section 6.1	All	All lighters shall be accompanied by the appropriate instructions or warnings, or both, communicating proper method of use.	NM - See Section 6.6.4	FAIL
	ASTM F400-00, Section 6.2	All	This safety information shall be conspicuously placed on the product or on a separate brochure or pamphlet packaged with the lighters or on a product packaging at the point of sale with contrasting background color, type size, or style that makes it distinct from other information.	M	PASS
	ASTM F400-00, Section 6.3	All	For all lighters, the safety information shall be accompanied in close proximity by the specific signal word "WARNING."	M	PASS
	ASTM F400-00, Section 6.4	All	For all lighters, the safety information shall contain the following statements:	See Below	-
	ASTM F400-00, Section 6.4.1	All	"Keep away from children" or "Keep out of reach of children"	M	PASS
	ASTM F400-00, Section 6.4.2	All	Ignite lighter away from face and clothing.	M	PASS
	ASTM F400-00, Section 6.5	All	Use one of the following as appropriate for the lighter type:	See Below	-
	ASTM F400-00, Section 6.5.1	All	Be sure flame is out after use. (Self-extinguishing lighters)	M	PASS
	ASTM F400-00, Section 6.5.2	All	This lighter does not self-extinguish; close cover to put out. (Non-self-extinguishing lighters)	N/A	-
	ASTM F400-00, Section 6.6	All	For all lighters, the safety information may include the substance of the following as appropriate for the lighter type:	See Below	-
	ASTM F400-00, Section 6.6.1	All	Contains flammable gas under pressure.	M	PASS
	ASTM F400-00, Section 6.6.2	All	Contains flammable fluid.	N/A	-
	ASTM F400-00, Section 6.6.3	All	When filled, will contain flammable fluid.	N/A	-
	ASTM F400-00, Section 6.6.4	All	Never expose to heat above 120°F (49°C) or to prolonged sunlight.	NM - States 48°C	FAIL
	ASTM F400-00, Section 6.6.5	All	Never puncture or put in fire.	M	PASS



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 6.6.6	All	Extreme heat is present above the visible flame. Extra care should be taken to prevent burn injury or fire. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.6.7	All	Do not keep lit for more than 10 seconds. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.7	All	Refillable gas lighters shall be accompanied by specific instructions as to the correct procedure to accomplish the refill operation, including type of fuel recommended.	N/A	-
	ASTM F400-00, Section 6.8.1	All	Fluid lighters shall be accompanied by the substance of the following:	See Below	-
	ASTM F400-00, Section 6.8.1.1	All	Fill only with the type of fluid recommended by the manufacturer.	N/A	-
	ASTM F400-00, Section 6.8.1.2	All	Fill slowly, never overfill.	N/A	-
	ASTM F400-00, Section 6.8.1.3	All	Wipe lighter and hands dry before igniting.	N/A	-
Product Markings	ASTM F400-00, Section 8	All	All lighters shall bear a permanent logo or name that identifies the manufacturer or distributor.	M	PASS
<b>PACKAGING</b>					
Retail Shelf Packaging	TM-HL-0002	All	Shall have final retail shelf packaging with scannable UPC stamp/label. Scanned numbers shall match as per supplied UPC label.	608707271282	-
<b>PHYSICAL CHARACTERISTICS</b>					
Dimensions (If Specified)	TM-HL-0001	1	Report overall dimensions.	3 1/4" x 7/8" x 3/8"	-
Weight (If Specified)	TM-HL-0001	1	Report weight.	16.1g	-
<b>CONSTRUCTION &amp; WORKMANSHIP</b>					
Defects	TM-HL-0002	All	Shall be free of aesthetic defects and shall meet the structural requirements as tested under IV. Performance.	NIM - Fails Sections 3.2.3, 3.2.5, 3.4, 3.5.2	FAIL



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating	
PERFORMANCE	Flame Generation	1	ASTM F400-00, Section 3.1.1 Standard Consumer Safety Specification for Lighters	Lighters shall require a deliberate manual operation to produce a flame. These operations shall conform to at least one of the following requirements:	See Below	-
			ASTM F400-00, Section 3.1.2	A system such that positive action on the part of the consumer is required to generate and maintain a flame.	M	PASS
			ASTM F400-00, Section 3.1.3	A system that requires two or more independent motions to generate a flame.	M	PASS
			ASTM F400-00, Section 3.2	A system that requires an actuating force equal to or greater than 3.4 lbf (15 N) to generate a flame.	N/A	-
			ASTM F400-00, Section 3.2.1 when tested in accordance with 7.1.	The maximum attainable flame height for lighters shall be limited with a setting or by product design, or both.	M	PASS
			ASTM F400-00, Section 3.2.2 when tested in accordance with 7.1.	Nonadjustable fluid lighters:	See Below	-
			ASTM F400-00, Section 3.2.3 when tested in accordance with 7.1.	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm).	N/A	-
			ASTM F400-00, Section 3.2.4 when tested in accordance with 7.1.	Nonadjustable postmixing and premixing burner lighters:	See Below	-
			ASTM F400-00, Section 3.2.4 when tested in accordance with 7.1.	Shall have a maximum attainable flame height of no more than 2 in. (50 mm).	N/A	-
			ASTM F400-00, Section 3.2.4 when tested in accordance with 7.1.	Adjustable postmixing burner Lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm) when deliberately adjusted by the consumer for maximum flame height.	NM - Flame is Over 4.75" #1, 2, 11, 23, 28, 50, 59, 79, 85, 87, 92, 103, 121, 129, 143, 145, 146	FAIL	
		1	Adjustable premixing burner lighters:	See Below	-	



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	Shall not be capable of producing a flame height in excess of 3 in. (75 mm) when deliberately adjusted by the consumer for maximum flame height. Adjustable postmixing burner lighters:	N/A	-
	ASTM F400-00, Section 3.2.5, when tested in accordance with 7.1.			See Below	-
		1	The first strike will not produce a flame height in excess of 4 in. (100 mm).	NM	FAIL
	ASTM F400-00, Section 3.2.6, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	#1, 23, 28, 36, 45, 79, 92, 117, 145 See Below	-
		1	The first strike will not produce a flame height in excess of 2.5 in. (60 mm).	N/A	-
	ASTM F400-00, Section 3.2.7, when tested in accordance with 7.1.	1	All adjustable flame height lighters:	See Below	-
		1	Shall not be capable of producing a flame height in excess of 2 in. (50 mm) when set at the lowest possible flame height..	M	PASS
Flame Height Adjustment	ASTM F400-00, Section 3.3	1	Adjustable lighters shall require a deliberate manual operation to increase the flame height when the lighter is used in the normal fashion.	M	PASS
	ASTM F400-00, Section 3.3.1	1	Flame control actuators protrude from the body of the lighter. Shall require a minimum actuating force of 0.25 lbf (1 N) applied over the entire range of adjustment in a tangential direction.	M	PASS
	ASTM F400-00, Section 3.3.2	1	Adjustable gas lighters having rotary movement flame control actuators approximately at right angles to the flame shall perform as follows:	See Below	-
	ASTM F400-00, Section 3.3.2.1	1	The flame control actuator is at the top of the lighter.	M	PASS
		1	Moving the actuator to the left shall produce a decrease in flame height.	M	PASS
	ASTM F400-00, Section 3.3.2.2	1	The flame control actuator is at the bottom of the lighter.	N/A	-
		1	A clockwise movement shall produce a decrease in flame height.	N/A	-



**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

**MC-4085-US  
Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.3.3	1	Adjustable gas lighters requiring motion of the flame control actuator approximately parallel to the flame axis shall decrease or increase the flame height according to the direction of the movement.	N/A	-
	ASTM F400-00, Section 3.3.4	1	Adjustable flame height lighters.	See Below	-
		1	Shall indicate the direction of movement to produce a higher or lower flame height.	M	PASS
	ASTM F400-00, Section 3.3.4	1	On lighters whose adjusting mechanisms conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter or may be of a nonpermanent tag or stick-on label, in the vicinity of the adjusting mechanism and be readily visible and understandable.	M	PASS
	ASTM F400-00, Section 3.3.5	1	On lighters whose adjusting mechanisms do not conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter, in the vicinity of the adjusting mechanism and be readily visible and understandable.	M	PASS
Spitting or Sputtering and Flaring	ASTM F400-00, Section 3.4, when tested in accordance with 7.2.	1	Gas lighters when set at the maximum flame height, shall exhibit no spitting or sputtering, or flaring.	NM Flaring (Over 2") #19, 37, 49, 85 Flaring (Over 2") 45° #37, 85 Flaring (Over 2") 10 Sec. Inverted #2, 29, 85 Spitting #85	FAIL
Flame Extinction	ASTM F400-00, Section 3.5.1, when tested in accordance with 7.3	1	Adjustable postmixing burner lighters, after a 5-second burn at maximum flame height, when extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds.	M	PASS
	ASTM F400-00, Section 3.5.2, when tested in accordance with 7.3.	1	Adjustable postmixing burner lighters at a flame height of 2 in. (50 mm), or the maximum height of adjustment allows, or nonadjustable postmixing burner lighters at their permanently set flame heights, after a 10 second burn.	See Below	-





**BUREAU**  
**OF STANDARDS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	When extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds after such action is completed.	NM #21, 92, 79	FAIL
		1	For gas lighters that have shields, an additional 2 second afterburn is acceptable if the flame height does not extend above the shield.	NM #21, 92, 79	FAIL
	ASTM F400-00, Section 3.5.3, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, after a 5 second burn at maximum flame height:	N/A	-
		1	When extinguished in the intended manner, shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
	ASTM F400-00, Section 3.5.4, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, when set at a flame height of 2 in. (50 mm) or the maximum flame height the adjustment allows, if lower than 50 mm, or nonadjustable premixing burner lighters at their permanently set flame heights, after a 10 second burn, when closed in the intended manner:	See Below	-
		1	Shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
Volumetric Displacement	ASTM F400-00, Section 3.6, when tested in accordance with 7.14.	1	Liquid portion of the fuel shall not exceed 85% of the volumetric capacity of the fuel chamber.	M #151 - 79.1%	PASS
Drop Test	ASTM F400-00, Section 4.2.1, when tested in accordance with Section 7.4.	1	Postmixing and premixing burner lighters must be capable of withstanding three separate 5-ft. (1.5 m) drops.	See Below	-
		1	Without fuel tank fragmentation.	23°C M	-10°C/23°C M
		1	Without resulting in sustained self-ignition.	M	M
		1	Without gas escape exceeding 15 mg/min.	M	M
		1	Without impairing the subsequent safe operation of the lighter.	M	M



**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 4.2.2, when tested in accordance with Section 7.3.	1	Fluid lighters must be capable of withstanding three separate 5 ft. (1.5 m) drops.	See Below	-
		1	Without fuel tank rupture.	N/A	-
	ASTM F400-00, Section 4.2.3	1	Without resulting in sustained self-ignition.	N/A	-
		1	Without impairing the subsequent safe operation of the lighter.	N/A	-
	ASTM F400-00, Section 4.3.1	1	Lighters that are still operable in the intended manner after testing, sections 4.2.1 or 4.2.2, shall be capable of meeting all the applicable requirements of section 3.	N/A	-
Temperature Test	ASTM F400-00, Section 4.3, when tested in accordance with Section 7.5.	1	Lighters shall be capable of withstanding a temperature of 131°F (55°C) for 4 hours.	M	PASS
		1	Lighters that are still operable in the intended manner shall be capable after return to 73 ± 4°F (23 ± 2°C) of meeting the applicable requirements in section 3.	M	PASS
Burning Test	ASTM F400-00, Section 4.4	1	Adjustable gas lighters set at maximum, nonadjustable gas lighters at their permanently set flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a burning time of 5 seconds in any hand-held attitude without evidence of any burning or distortion of components so as to cause a hazardous condition.	M	PASS
	ASTM F400-00, Section 4.4.1	1	Adjustable gas lighters set at 50 mm (2 inches) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at the permanent flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a burning time of 10 seconds in any hand-held attitude with the lighter in a position 45° below the horizontal with no burning or distortion of components so as to cause hazardous conditions.	M	PASS
Continuous Burn	ASTM F400-00, Section 4.5, when tested in accordance with Section 7.6.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters:	See Below	-



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0019  
Technician Name: DC/NS

MC-4085-US

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
Cycling Burn	ASTM F400-00, Section 4.6, when tested in accordance with Section 7.7.	1	Shall be capable of withstanding a continuous burning time of 2 minutes with the flame in a vertical attitude without causing a hazardous condition.	M	PASS
External Finish	ASTM F400-00, Section 4.7	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters: Shall be capable of withstanding a burning time of 20 seconds, repeated 10 times.	See Below	-
Compatibility	ASTM F400-00, Section 4.8 when tested in accordance with 7.8 and 7.9	1	Lighters shall have no external sharp edges that could cause accidental cuts or abrasions to the consumer when handled or used in the intended manner.	M	PASS
Pressure Tests	ASTM F400-00, Section 4.9, when tested in accordance with Section 7.10.	1	Components of gas and fluid lighters that come in contact with the fuel recommended shall not deteriorate after exposure so as to fail any of the criteria herein or allow gas to escape exceeding 15 mg/minute.	M	PASS
Refilling of Lighters	ASTM F400-00, Section 5.1, when tested in accordance with Section 7.11 - 7.13	1	Gas lighters shall be capable of withstanding an internal pressure of two times the vapor pressure occurring at 131°F (55°C) of the fuel recommended by the manufacturer.	N/A	-
	ASTM F400-00, Section 5.2, when tested in accordance with Section 7.11.	1	Refillable fluid lighters shall include specific instructions and warnings as applicable in accordance with section 6.	N/A	-
	ASTM F400-00, Section 5.3	1	Refillable gas lighters shall have specific training instructions and warnings as applicable in accordance with section 6.	N/A	-



**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0019  
 Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 5.4, when tested in accordance with Section 7.13.	1	Refillable gas lighters: The refilling valve in a pressurized fuel tank lighter shall be secure enough so as not to allow an escape of gas exceeding 15 mg/min.	N/A	-
Certification	16 CFR 1212	1	Certification Showing Qualification Tests For Child Resistance Has Been Conducted Using Appropriate Surrogate Lighters And Child Panels Specified In The Regulations Must Be Submitted For Verification	N/T - Per Client Request	-

**Key:**  
 M Meets NM Does Not Meet  
 NA Not Applicable NT Not Tested  
 \* Additional Charge For This Test \*\* Mandatory Requirement

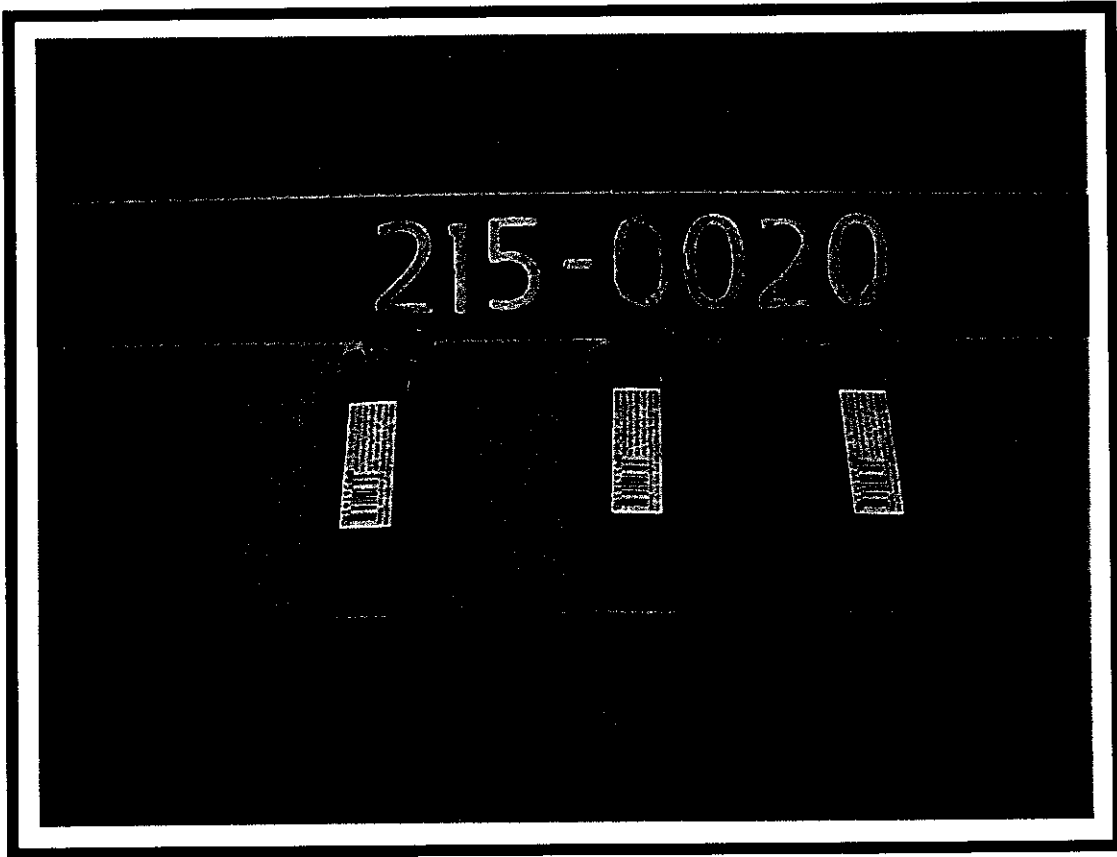
No. Of Samples Required For Complete Testing:	20
No. Of (Fully Packed) Cartons For Transit Testing:	1
No. Of Working Days For Complete Testing:	7

Client Approval: June 3, 2003  
 Creation Date: March 26, 2004  
 Editorial Revision Date:  
 Pricing Review Date:  
 Technical Review Date:

# REPORT

Lab Number: (5104)215-0020

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Protocol	9 Pages
1 Exhibit	1 Page
Other	N/A

# TEST REPORT

LIGHTER ASSOCIATION, INC.  
 1920 N. STREET, NW  
 WASHINGTON , DC, DISTRICT OF  
 COLUMBIA, 20036 UNITED STATES

LAB LOCATION: BUFFALO -  
 HARDLINES  
 LAB NUMBER: (US) (5104) 215-0020

CLIENT NO.: NOT LISTED  
 DEPARTMENT: NOT LISTED

ATTN: DAVID BAKER

DATE IN: AUGUST 2, 2004  
 DATE OUT: SEPTEMBER 9, 2004  
 MOD. LOG IN: SEPTEMBER 8, 2004  
 WORKING DAYS: 1  
 ADDENDUM DATE: N/A

OVERALL RATING	
PASS	_____
CORRECTIVE ACTION REQUIRED	_____
FAIL	X

TESTING FOR DISPOSABLE LIGHTERS ( ASTM F400 ) MC-4085-US
--

DEVELOPMENT	PRODUCTION	X	CUSTOMER COMPLAINT	OTHER
<b>Sample Description:</b> Roll N Lite Lighters				
<b>Final Packaging:</b>		Yes (submitted for review)	X	No (not submitted for review)
<b>Manufacturer:</b>		Not Listed		
<b>Country of Origin:</b>		China	<b>Style:</b>	Not Listed
<b>Color:</b>		Various		<b>SKU Number:</b> Not Listed
<b>Re-test:</b>		Yes:	No: X	<b>Charge Vendor:</b> Yes: No: X
<b>Previous Report No.:</b>		N/A		
<b>Addendum Report:</b>		Yes:	No: X	
<b>Reason For Addendum:</b>		N/A		
TEST PROPERTY	PASS	C.A.R.	FAIL	COMMENTS
Labeling		X		
Physical Characteristics	X			
Construction Qualities			X	
Performance			X	
Analytical				Not Tested

**EXECUTIVE SUMMARY:** At the request of the client, submitted samples were tested per ASTM F400. All sections of the standard were evaluated, except Child Resistance per client request.

The samples provided received a **CORRECTIVE ACTION REQUIRED** rating for the following reason:

**Labeling :**

- Section 6.6.4 – Label states, “exposeto” as one word. Requirement – Label must state, Never expose to heat above 49°C or to prolonged sunlight.

The samples provided received a **FAIL** rating for the following reasons :

**Construction and Workmanship :**

Defects – Does not meet all tested performance requirements. See Performance below for details.

**Performance :**

- Section 3.2.5 – One lighter was capable of producing a first strike flame greater than 4”. Requirement – Shall have the flame height adjusted prior to reaching the user in such a manner that the lighter, when first struck by the user without changing the adjustment, will not produce a flame height in excess of 100 mm(4 in.).
- Section 3.4 – Four lighters exhibited flaring greater than 2” (upright position) from the steady flame height .Three lighters exhibited flaring greater than 2”(45° below horizontal) from the steady flame height. Requirement – Maximum of 2” variation in flame height from the steady – state flame condition. All flaring was observed within the 5 second allotted test time.
- Section 3.5.2 – One lighter exhibited exposed flame for more than 4 seconds. Requirement – Any exposed flame must completely extinguish within two seconds. An additional 2 seconds is given for lighters with shields.

**RECOMMENDATION FOR IMPROVEMENT:**

- Provide a sample that meets the Labeling requirements.
- Provide a sample that meets the Construction and Workmanship requirements.
- Provide a sample that meets the Performance requirements.

**Note:** Bureau Veritas Consumer Products Services, Inc. randomly purchased samples from various retail sources within a one hundred mile radius from Buffalo, NY. The date code of the item is 04B2.

Bureau Veritas  
Consumer Products Services, Inc.



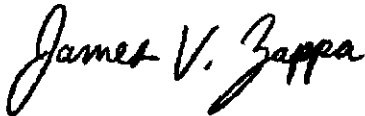
Rufus K. Moberly  
Associate Product Test Engineer,  
Hardlines Department  
Technical Consulting and Support Services

Bureau Veritas  
Consumer Products Services, Inc.



Glenn Sylvia  
V.P. of Hardlines

Bureau Veritas  
Consumer Products Services, Inc.



James V. Zappa  
Product Test Engineer  
Hardlines Department  
Technical Consulting and Support Services

/kni





**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0020  
 Technician Name: DC/NS  
 Test Date: August 2, 2004  
 Reviewed By/Date: RKM - 9/8/04

**BUREAU VERITAS TEST PROTOCOL FOR  
MC-4085-US**

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>LABELING</b>					
Instructions and Warnings	ASTM F400-00, Section 6.1	All	All lighters shall be accompanied by the appropriate instructions or warnings, or both, communicating proper method of use.	NM - Label Has Error	FAIL
	ASTM F400-00, Section 6.2	All	This safety information shall be conspicuously placed on the product or on a separate brochure or pamphlet packaged with the lighters or on a product packaging at the point of sale with contrasting background color, type size, or style that makes it distinct from other information.	M	PASS
	ASTM F400-00, Section 6.3	All	For all lighters, the safety information shall be accompanied in close proximity by the specific signal word "WARNING."	M	PASS
	ASTM F400-00, Section 6.4	All	For all lighters, the safety information shall contain the following statements:	See Below	-
	ASTM F400-00, Section 6.4.1	All	"Keep away from children" or "keep out of reach of children"	M	PASS
	ASTM F400-00, Section 6.4.2	All	Ignite lighter away from face and clothing.	M	PASS
	ASTM F400-00, Section 6.5	All	Use one of the following as appropriate for the lighter type:	See Below	-
	ASTM F400-00, Section 6.5.1	All	Be sure flame is out after use. (Self-extinguishing lighters)	M	PASS
	ASTM F400-00, Section 6.5.2	All	This lighter does not self-extinguish; close cover to put out. (Non-self-extinguishing lighters)	N/A	-
	ASTM F400-00, Section 6.6	All	For all lighters, the safety information may include the substance of the following as appropriate for the lighter type: Contains flammable gas under pressure.	See Below	-
	ASTM F400-00, Section 6.6.1	All	Contains flammable fluid.	M	PASS
	ASTM F400-00, Section 6.6.2	All	When filled, will contain flammable fluid.	N/A	-
	ASTM F400-00, Section 6.6.3	All	Never expose to heat above 120°F (49°C) or to prolonged sunlight.	N/A	-
	ASTM F400-00, Section 6.6.4	All	Never puncture or put in fire.	NM - Typo - "Exposeto" Should State "Expose to"	FAIL
	ASTM F400-00, Section 6.6.5	All		M	PASS



**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

**MC-4085-US  
Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 6.6.6	All	Extreme heat is present above the visible flame. Extra care should be taken to prevent burn injury or fire. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.6.7	All	Do not keep lit for more than 10 seconds. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.7	All	Refillable gas lighters shall be accompanied by specific instructions as to the correct procedure to accomplish the refill operation, including type of fuel recommended.	N/A	-
	ASTM F400-00, Section 6.8.1	All	Fluid lighters shall be accompanied by the substance of the following:	See Below	-
	ASTM F400-00, Section 6.8.1.1	All	Fill only with the type of fluid recommended by the manufacturer.	N/A	-
	ASTM F400-00, Section 6.8.1.2	All	Fill slowly, never overflow.	N/A	-
	ASTM F400-00, Section 6.8.1.3	All	Wipe lighter and hands dry before igniting.	N/A	-
Product Markings	ASTM F400-00, Section 8	All	All lighters shall bear a permanent logo or name that identifies the manufacturer or distributor.	M	PASS
<b>PACKAGING</b>					
Retail Shelf Packaging	TM-HL-0002	All	Shall have final retail shelf packaging with scannable UPC stamp/label. Scanned numbers shall match as per supplied UPC label.	09361433	-
<b>PHYSICAL CHARACTERISTICS</b>					
Dimensions (If Specified)	TM-HL-0001	1	Report overall dimensions.	3 1/4" x 1" x 1/2"	-
Weight (If Specified)	TM-HL-0001	1	Report weight.	16.4g	-
<b>CONSTRUCTION &amp; WORKMANSHIP</b>					
Defects	TM-HL-0002	All	Shall be free of aesthetic defects and shall meet the structural requirements as tested under IV. Performance.	NM - Fails Sections 3.4, 3.5.2, 3.6	FAIL



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>PERFORMANCE</b>					
Flame Generation	ASTM F400-00, Standard Consumer Safety Specification for Lighters	1	Lighters shall require a deliberate manual operation to produce a flame. These operations shall conform to at least one of the following requirements:	See Below	-
	ASTM F400-00, Section 3.1.1	1	A system such that positive action on the part of the consumer is required to generate and maintain a flame.	M	PASS
	ASTM F400-00, Section 3.1.2	1	A system that requires two or more independent motions to generate a flame.	M	PASS
	ASTM F400-00, Section 3.1.3	1	A system that requires an actuating force equal to or greater than 3.4 lbf (15 N) to generate a flame.	N/A	-
Flame Control	ASTM F400-00, Section 3.2	1	The maximum attainable flame height for lighters shall be limited with a setting or by product design, or both.	M	PASS
	ASTM F400-00, Section 3.2.1 when tested in accordance with 7.1.	1	Nonadjustable fluid lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm).	N/A	-
	ASTM F400-00, Section 3.2.2 when tested in accordance with 7.1.	1	Nonadjustable postmixing and premixing burner lighters:	See Below	-
		1	Shall have a maximum attainable flame height of no more than 2 in. (50 mm).	N/A	-
	ASTM F400-00, Section 3.2.3 when tested in accordance with 7.1.	1	Adjustable postmixing burner Lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm) when deliberately adjusted by the consumer for maximum flame height.	M	PASS
	ASTM F400-00, Section 3.2.4, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	See Below	-



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

MC-4085-US

Disposable Lighters (ASTM F400)

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	Shall not be capable of producing a flame height in excess of 3 in. (75 mm) when deliberately adjusted by the consumer for maximum flame height.	N/A	-
	ASTM F400-00, Section 3.2.5, when tested in accordance with 7.1.		Adjustable postmixing burner lighters:	See Below	-
		1	The first strike will not produce a flame height in excess of 4 in. (100 mm).	NM #113	FAIL
	ASTM F400-00, Section 3.2.6, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	See Below	-
		1	The first strike will not produce a flame height in excess of 2.5 in. (60 mm).	N/A	-
	ASTM F400-00, Section 3.2.7, when tested in accordance with 7.1.	1	All adjustable flame height lighters:	See Below	-
		1	Shall not be capable of producing a flame height in excess of 2 in. (50 mm) when set at the lowest possible flame height.	M	PASS
Flame Height Adjustment	ASTM F400-00, Section 3.3	1	Adjustable lighters shall require a deliberate manual operation to increase the flame height when the lighter is used in the normal fashion.	M	PASS
	ASTM F400-00, Section 3.3.1	1	Flame control actuators protrude from the body of the lighter. Shall require a minimum actuating force of 0.25 lbf (1 N) applied over the entire range of adjustment in a tangential direction.	M	PASS
	ASTM F400-00, Section 3.3.2	1	Adjustable gas lighters having rotary movement flame control actuators approximately at right angles to the flame shall perform as follows:	See Below	-
	ASTM F400-00, Section 3.3.2.1	1	The flame control actuator is at the top of the lighter.	M	PASS
		1	Moving the actuator to the left shall produce a decrease in flame height.	M	PASS
	ASTM F400-00, Section 3.3.2.2	1	The flame control actuator is at the bottom of the lighter.	N/A	-
		1	A clockwise movement shall produce a decrease in flame height.	N/A	-



**BUREAU  
VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

**MC-4085-US  
Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.3.3	1	Adjustable gas lighters requiring motion of the flame control actuator approximately parallel to the flame axis shall decrease or increase the flame height according to the direction of the movement.	N/A	-
	ASTM F400-00, Section 3.3.4	1	Adjustable flame height lighters.	See Below	-
		1	Shall indicate the direction of movement to produce a higher or lower flame height.	M	PASS
	ASTM F400-00, Section 3.3.4	1	On lighters whose adjusting mechanisms conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter or may be of a nonpermanent tag or stick-on label, in the vicinity of the adjusting mechanism and be readily visible and understandable.	M	PASS
	ASTM F400-00, Section 3.3.5	1	On lighters whose adjusting mechanisms do not conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter, in the vicinity of the adjusting mechanism and be readily visible and understandable.	N/A	-
Spitting or Sputtering and Flaring	ASTM F400-00, Section 3.4, when tested in accordance with 7.2.	1	Gas lighters when set at the maximum flame height, shall exhibit no spitting or sputtering, or flaring.	NM Flaring: #85, 89, 108, 147 Flaring After 10 Seconds Upside Down: #27, 38, 135	FAIL
Flame Extinction	ASTM F400-00, Section 3.5.1, when tested in accordance with 7.3	1	Adjustable postmixing burner lighters, after a 5-second burn at maximum flame height, when extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds.	M	PASS
	ASTM F400-00, Section 3.5.2, when tested in accordance with 7.3.	1	Adjustable postmixing burner lighters at a flame height of 2 in. (50 mm), or the maximum height of adjustment allows, or nonadjustable postmixing burner lighters at their permanently set flame heights, after a 10 second burn:	See Below	-
		1	When extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds after such action is completed.	NM 3 Second Afterburn: #61	FAIL
		1	For gas lighters that have shields, an additional 2 second afterburn is acceptable if the flame height does not extend above the shield.	M	PASS



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

MC-4085-US

Disposable Lighters (ASTM F400)

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.5.3, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, after a 5 second burn at maximum flame height:	N/A	-
		1	When extinguished in the intended manner, shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
	ASTM F400-00, Section 3.5.4, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, when set at a flame height of 2 in. (50 mm) or the maximum flame height the adjustment allows, if lower than 50 mm, or nonadjustable premixing burner lighters at their permanently set flame heights, after a 10 second burn, when closed in the intended manner:	See Below	-
		1	Shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
Volumetric Displacement	ASTM F400-00, Section 3.6, when tested in accordance with 7.1.4.	1	Liquid portion of the fuel shall not exceed 85% of the volumetric capacity of the fuel chamber.	NM #151 - 90%	FAIL
Drop Test	ASTM F400-00, Section 4.2.1, when tested in accordance with Section 7.4.	1	Postmixing and premixing burner lighters must be capable of withstanding three separate 5-ft. (1.5 m) drops.	See Below 4 Samples Failed in a Safe Manner #27, 35, 43, 46	-
		1	Without fuel tank fragmentation.	23°C -10°C M M	PASS
		1	Without resulting in sustained self-ignition.	M M	PASS
		1	Without gas escape exceeding 15 mg/min.	M M	PASS
		1	Without impairing the subsequent safe operation of the lighter.	M M	PASS
	ASTM F400-00, Section 4.2.2, when tested in accordance with Section 7.3.	1	Fluid lighters must be capable of withstanding three separate 5 ft. (1.5 m) drops.	See Below	-
		1	Without fuel tank rupture.	N/A	-
	ASTM F400-00, Section 4.2.3	1	Without resulting in sustained self-ignition.	N/A	-



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

**MC-4085-US**

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	Without impairing the subsequent safe operation of the lighter.	N/A	-
	ASTM F400-00, Section 4.3.1	1	Lighters that are still operable in the intended manner after testing, sections 4.2.1 or 4.2.2, shall be capable of meeting all the applicable requirements of section 3.	N/A	-
Temperature Test	ASTM F400-00, Section 4.3, when tested in accordance with Section 7.5.	1	Lighters shall be capable of withstanding a temperature of 131°F (55°C) for 4 hours.	M	PASS
		1	Lighters that are still operable in the intended manner shall be capable after return to 73 ± 4°F (23 ± 2°C) of meeting the applicable requirements in section 3.	M	PASS
Burning Test	ASTM F400-00, Section 4.4	1	Adjustable gas lighters set at maximum, nonadjustable gas lighters at their permanently set flame height, or fluid type lighters:	M	PASS
		1	Shall be capable of withstanding a burning time of 5 seconds in any hand-held attitude without evidence of any burning or distortion of components so as to cause a hazardous condition.	M	PASS
	ASTM F400-00, Section 4.4.1	1	Adjustable gas lighters set at 50 mm (2 inches) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at the permanent flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a burning time of 10 seconds in any hand-held attitude with the lighter in a position 45° below the horizontal with no burning or distortion of components so as to cause hazardous conditions.	M	PASS
Continuous Burn	ASTM F400-00, Section 4.5, when tested in accordance with Section 7.6.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a continuous burning time of 2 minutes with the flame in a vertical attitude without causing a hazardous condition.	M	PASS
Cycling Burn	ASTM F400-00, Section 4.6, when tested in accordance with Section 7.7.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters:	See Below	-



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
External Finish	ASTM F400-00, Section 4.7	1	Shall be capable of withstanding a burning time of 20 seconds, repeated 10 times.	M	PASS
Compatibility	ASTM F400-00, Section 4.8 when tested in accordance with 7.8 and 7.9	1	Lighters shall have no external sharp edges that could cause accidental cuts or abrasions to the consumer when handled or used in the intended manner.	M	PASS
Pressure Tests	ASTM F400-00, Section 4.9, when tested in accordance with Section 7.10.	1	Components of gas and fluid lighters that come in contact with the fuel recommended shall not deteriorate after exposure so as to fail any of the criteria herein or allow gas to escape exceeding 15 mg/minute.	M	PASS
Refilling of Lighters	ASTM F400-00, Section 5.1, when tested in accordance with Section 7.11 - 7.13	1	Gas lighters shall be capable of withstanding an internal pressure of two times the vapor pressure occurring at 131°F (55°C) of the fuel recommended by the manufacturer.	M	PASS
	ASTM F400-00, Section 5.2, when tested in accordance with Section 7.11.	1	Refillable fluid lighters shall include specific instructions and warnings as applicable in accordance with section 6.	N/A	-
	ASTM F400-00, Section 5.3	1	Refillable fluid lighters having a sealed fluid reservoir shall be free of fuel leakage from both the sealed reservoir and sealing closure.	N/A	-
	ASTM F400-00, Section 5.4, when tested in accordance with Section 7.13.	1	Refillable gas lighters shall have specific training instructions and warnings as applicable in accordance with section 6.	N/A	-
Certification	16 CFR 1212	1	Refillable gas lighters: The refilling valve in a pressurized fuel tank lighter shall be secure enough so as not to allow an escape of gas exceeding 15 mg/min. Certification Showing Qualification Tests For Child Resistance Has Been Conducted Using Appropriate Surrogate Lighters And Child Panels Specified In The Regulations Must Be Submitted For Verification	N/A	-
				N/T - Per Client Request	-

**Key:**  
M Meets  
NA Not Applicable  
NM Does Not Meet  
NT Not Tested





**BUREAU  
VERITAS**

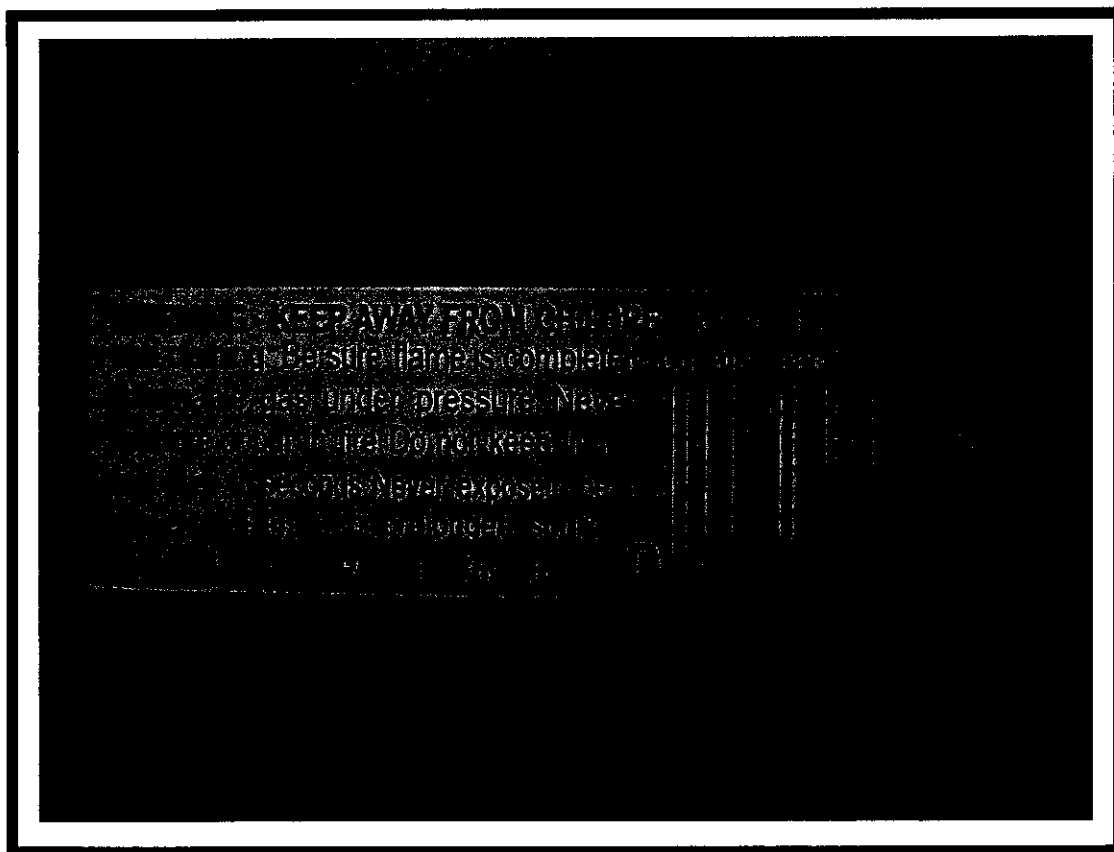
\* Additional Charge For This Test \*\* Mandatory Requirement

BV Lab Number: (5104)215-0020  
Technician Name: DC/NS

No. Of Samples Required For Complete Testing:	20
No. Of (Fully Packed) Cartons For Transit Testing:	1
No. Of Working Days For Complete Testing:	7

Client Approval:  
Creation Date: June 3, 2003  
Editorial Revision Date: March 26, 2004  
Pricing Review Date:  
Technical Review Date:

EXHIBIT #1

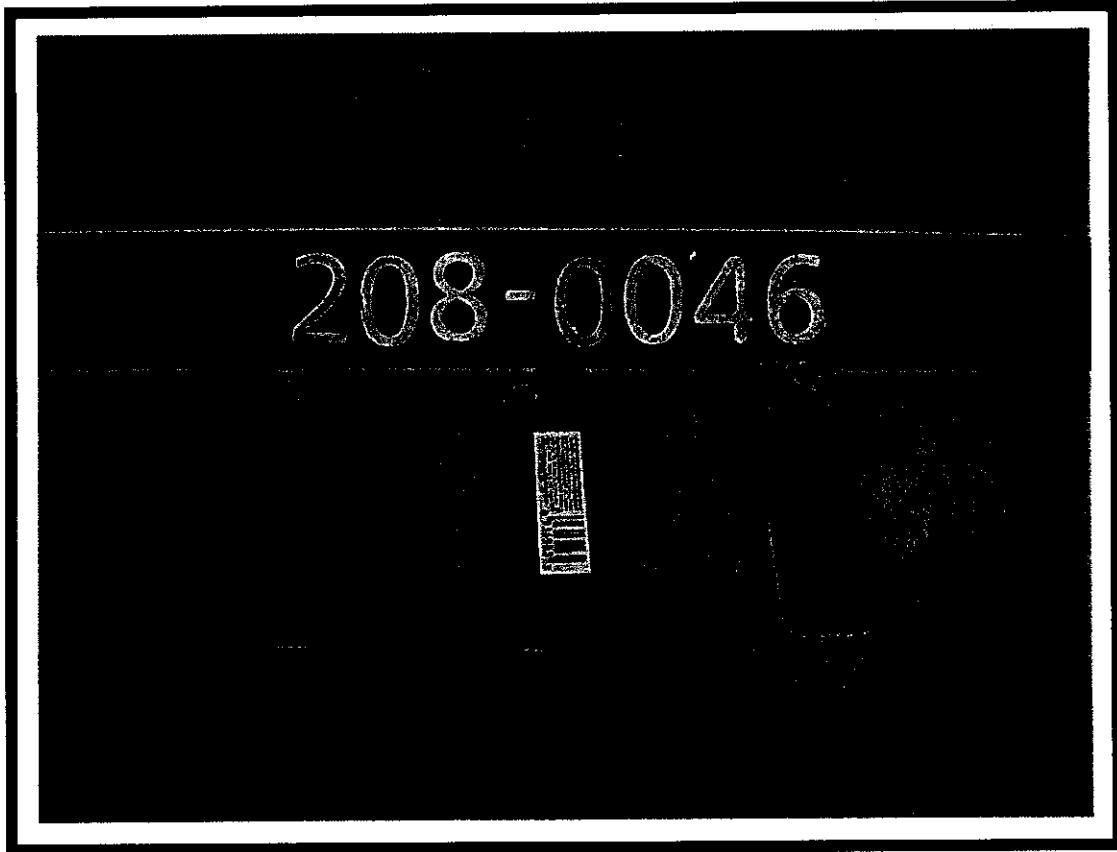


EXAMPLE OF IMPROPER LABELING

# REPORT

Lab Number: (5104)208-0046

Page 1 of 1



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Report	2 Pages
Protocol	9 Pages
1 Exhibit	1 Page
Other	N/A

# TEST REPORT

LIGHTER ASSOCIATION, INC.  
 1920 N. STREET, NW  
 WASHINGTON, DC, DISTRICT OF  
 COLUMBIA, 20036 UNITED STATES

LAB LOCATION: BUFFALO -  
 HARDLINES  
 LAB NUMBER: (US) (5104)208-0046  
 CLIENT NO.: NOT LISTED  
 DEPARTMENT: NOT LISTED

ATTN: DAVID BAKER

DATE IN: JULY 26, 2004  
 DATE OUT: AUGUST 31, 2004  
 MOD. LOG IN: NA  
 WORKING DAYS: 26  
 ADDENDUM DATE: NA

OVERALL RATING	
PASS	_____
CORRECTIVE ACTION REQUIRED	_____
FAIL	X

TESTING FOR MC-4085-US DISPOSABLE LIGHTERS ( ASTM F400 )
--

DEVELOPMENT	PRODUCTION	X	CUSTOMER COMPLAINT	OTHER
<b>Sample Description:</b> Liberty Lites Lighter				
<b>Final Packaging:</b>		Yes (submitted for review)	X	No (not submitted for review)
<b>Manufacturer:</b> Not Listed				
<b>Country of Origin:</b> China		<b>Style:</b> Not Listed		
<b>Color:</b> Various		<b>SKU Number:</b> Not Listed		
<b>Re-test:</b>		Yes:	No: X	<b>Charge Vendor:</b> Yes: No: X
<b>Previous Report No.:</b> N/A				
<b>Addendum Report:</b> Yes: No: X				
<b>Reason For Addendum:</b> N/A				
TEST PROPERTY	PASS	C.A.R.	FAIL	COMMENTS
Labeling	X			
Physical Characteristics	X			
Construction Qualities			X	
Performance			X	
Analytical				Not Tested

**EXECUTIVE SUMMARY:** At the request of the client, submitted samples were tested per ASTM F400. All sections of the standard were evaluated, except for Child Resistance per client request.

The samples provided received a FAIL rating for the following reasons :

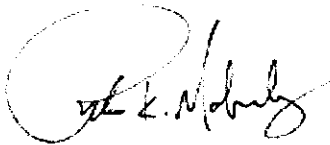
**Performance :**

- Section 3.2.5 - # 111, # 93 and # 77 produced a initial flame height greater than 4 inches. Requirement – Will not produce an initial flame in excess of 4 inches.
- Section 3.2.7 - # 79 produced a flame in excess of 2 inches. Requirement – Shall not be capable of producing a flame in excess of 2 inches on the lowest flame height setting.
- Section 3.6 - #151 had a volumetric capacity of 88.4%. Requirement – Liquid portion of fuel shall not exceed 85% of the volumetric capacity.

**RECOMMENDATION FOR IMPROVEMENT:**

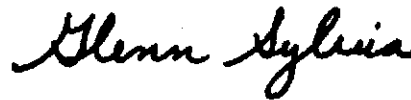
- Provide a sample that meets the Performance requirements.

Bureau Veritas  
Consumer Products Services, Inc.



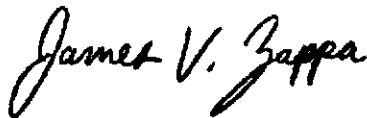
Rufus K. Moberly  
Associate Product Test Engineer,  
Hardlines Department  
Technical Consulting and Support Services

Bureau Veritas  
Consumer Products Services, Inc.



Glenn Sylvia  
V.P. of Hardlines

Bureau Veritas  
Consumer Products Services, Inc.



James V. Zappa  
Product Test Engineer  
Hardlines Department  
Technical Consulting and Support Services



**BUREAU  
VERITAS**

BV Lab Number: (5104)208-0046  
 Technician Name: DC/NS  
 Test Date: July 27, 2004  
 Reviewed By/Date: RKM 8/30/04

**BUREAU VERITAS TEST PROTOCOL FOR  
MC-4085-US**

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>LABELING</b>					
Instructions and Warnings	ASTM F400-00, Section 6.1	All	All lighters shall be accompanied by the appropriate instructions or warnings, or both, communicating proper method of use.	M	PASS
	ASTM F400-00, Section 6.2	All	This safety information shall be conspicuously placed on the product or on a separate brochure or pamphlet packaged with the lighters or on a product packaging at the point of sale with contrasting background color, type size, or style that makes it distinct from other information.	M	PASS
	ASTM F400-00, Section 6.3	All	For all lighters, the safety information shall be accompanied in close proximity by the specific signal word "WARNING."	M	PASS
	ASTM F400-00, Section 6.4	All	For all lighters, the safety information shall contain the following statements:	See Below	-
	ASTM F400-00, Section 6.4.1	All	"Keep away from children" or "keep out of reach of children"	M	PASS
	ASTM F400-00, Section 6.4.2	All	Ignite lighter away from face and clothing.	M	PASS
	ASTM F400-00, Section 6.5	All	Use one of the following as appropriate for the lighter type:	See Below	-
	ASTM F400-00, Section 6.5.1	All	Be sure flame is out after use. (Self-extinguishing lighters)	M	PASS
	ASTM F400-00, Section 6.5.2	All	This lighter does not self-extinguish; close cover to put out. (Non-self-extinguishing lighters)	N/A	-
	ASTM F400-00, Section 6.6	All	For all lighters, the safety information may include the substance of the following as appropriate for the lighter type: Contains flammable gas under pressure.	See Below	-
	ASTM F400-00, Section 6.6.1	All	Contains flammable fluid.	M	PASS
	ASTM F400-00, Section 6.6.2	All	When filled, will contain flammable fluid.	N/A	-
	ASTM F400-00, Section 6.6.3	All	Never expose to heat above 120°F (49°C) or to prolonged sunlight.	N/A	-
	ASTM F400-00, Section 6.6.4	All	Never puncture or put in fire.	M	PASS
	ASTM F400-00, Section 6.6.5	All		M	PASS



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

MC-4085-US

Disposable Lighters (ASTM F400)

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 6.6.6	All	Extreme heat is present above the visible flame. Extra care should be taken to prevent burn injury or fire. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.6.7	All	Do not keep lit for more than 10 seconds. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.7	All	Refillable gas lighters shall be accompanied by specific instructions as to the correct procedure to accomplish the refill operation, including type of fuel recommended.	N/A	-
	ASTM F400-00, Section 6.8.1	All	Fluid lighters shall be accompanied by the substance of the following:	See Below	-
	ASTM F400-00, Section 6.8.1.1	All	Fill only with the type of fluid recommended by the manufacturer.	N/A	-
	ASTM F400-00, Section 6.8.1.2	All	Fill slowly, never overfill.	N/A	-
	ASTM F400-00, Section 6.8.1.3	All	Wipe lighter and hands dry before igniting.	N/A	-
Product Markings	ASTM F400-00, Section 8	All	All lighters shall bear a permanent logo or name that identifies the manufacturer or distributor.	M	PASS
<b>PACKAGING</b>					
Retail Shelf Packaging	TM-HL-0002	All	Shall have final retail shelf packaging with scannable UPC stamp/label. Scanned numbers shall match as per supplied UPC label.	09369833	PASS
<b>PHYSICAL CHARACTERISTICS</b>					
Dimensions (If Specified)	TM-HL-0001	1	Report overall dimensions.	3 1/4" x 1" x 1/2"	-
Weight (If Specified)	TM-HL-0001	1	Report weight.	17.5g	-
<b>CONSTRUCTION &amp; WORKMANSHIP</b>					
Defects	TM-HL-0002	All	Shall be free of aesthetic defects and shall meet the structural requirements as tested under IV. Performance.	M	PASS



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>PERFORMANCE</b>					
Flame Generation	ASTM F400-00, Standard Consumer Safety Specification for Lighters	1	Lighters shall require a deliberate manual operation to produce a flame. These operations shall conform to at least one of the following requirements:	See Below	-
	ASTM F400-00, Section 3.1.1	1	A system such that positive action on the part of the consumer is required to generate and maintain a flame.	M	PASS
	ASTM F400-00, Section 3.1.2	1	A system that requires two or more independent motions to generate a flame.	M	PASS
	ASTM F400-00, Section 3.1.3	1	A system that requires an actuating force equal to or greater than 3.4 lbf (15 N) to generate a flame.	N/T	-
Flame Control	ASTM F400-00, Section 3.2	1	The maximum attainable flame height for lighters shall be limited with a setting or by product design, or both.	M	PASS
	ASTM F400-00, Section 3.2.1 when tested in accordance with 7.1.	1	Nonadjustable fluid lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm).	N/A	-
	ASTM F400-00, Section 3.2.2 when tested in accordance with 7.1.	1	Nonadjustable postmixing and premixing burner lighters:	See Below	-
		1	Shall have a maximum attainable flame height of no more than 2 in. (50 mm).	N/A	-
	ASTM F400-00, Section 3.2.3 when tested in accordance with 7.1.	1	Adjustable postmixing burner Lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm) when deliberately adjusted by the consumer for maximum flame height.	M	PASS
	ASTM F400-00, Section 3.2.4, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	See Below	-





**BUREAU**  
**VERITAS**

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	Shall not be capable of producing a flame height in excess of 3 in. (75 mm) when deliberately adjusted by the consumer for maximum flame height.	N/A	-
	ASTM F400-00, Section 3.2.5, when tested in accordance with 7.1.		Adjustable postmixing burner lighters:	See Below	-
		1	The first strike will not produce a flame height in excess of 4 in. (100 mm).	NM # 111, 93, 77	FAIL
	ASTM F400-00, Section 3.2.6, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	See Below	-
		1	The first strike will not produce a flame height in excess of 2.5 in. (60 mm).	N/A	-
	ASTM F400-00, Section 3.2.7, when tested in accordance with 7.1.	1	All adjustable flame height lighters:	See Below	-
		1	Shall not be capable of producing a flame height in excess of 2 in. (50 mm) when set at the lowest possible flame height.	# 79	FAIL
Flame Height Adjustment	ASTM F400-00, Section 3.3	1	Adjustable lighters shall require a deliberate manual operation to increase the flame height when the lighter is used in the normal fashion.	M	PASS
	ASTM F400-00, Section 3.3.1	1	Flame control actuators protrude from the body of the lighter. Shall require a minimum actuating force of 0.25 lbf (1 N) applied over the entire range of adjustment in a tangential direction.	M	PASS
	ASTM F400-00, Section 3.3.2	1	A adjustable gas lighters having rotary movement flame control actuators approximately at right angles to the flame shall perform as follows:	See Below	-
	ASTM F400-00, Section 3.3.2.1	1	The flame control actuator is at the top of the lighter.	M	PASS
		1	Moving the actuator to the left shall produce a decrease in flame height.	M	PASS
	ASTM F400-00, Section 3.3.2.2	1	The flame control actuator is at the bottom of the lighter.	N/A	-
		1	A clockwise movement shall produce a decrease in flame height.	N/A	-



**BUREAU  
OF STANDARDS**

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

**MC-4085-US  
Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.3.3	1	Adjustable gas lighters requiring motion of the flame control actuator approximately parallel to the flame axis shall decrease or increase the flame height according to the direction of the movement.	N/A	-
	ASTM F400-00, Section 3.3.4	1	Adjustable flame height lighters.	See Below	-
		1	Shall indicate the direction of movement to produce a higher or lower flame height.	M	PASS
	ASTM F400-00, Section 3.3.4	1	On lighters whose adjusting mechanisms conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter or may be of a nonpermanent tag or stick-on label, in the vicinity of the adjusting mechanism and be readily visible and understandable.	M	PASS
	ASTM F400-00, Section 3.3.5	1	On lighters whose adjusting mechanisms do not conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter, in the vicinity of the adjusting mechanism and be readily visible and understandable.	N/A	-
Spitting or Sputtering and Flaring	ASTM F400-00, Section 3.4, when tested in accordance with 7.2.	1	Gas lighters when set at the maximum flame height, shall exhibit no spitting or sputtering, or flaring.	M	PASS
Flame Extinction	ASTM F400-00, Section 3.5.1, when tested in accordance with 7.3	1	Adjustable postmixing burner lighters, after a 5-second burn at maximum flame height, when extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds.	M	PASS
	ASTM F400-00, Section 3.5.2, when tested in accordance with 7.3.	1	Adjustable postmixing burner lighters at a flame height of 2 in. (50 mm), or the maximum height of adjustment allows, or nonadjustable postmixing burner lighters at their permanently set flame heights, after a 10 second burn: When extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds after such action is completed.	See Below	-
		1	For gas lighters that have shields, an additional 2 second afterburn is acceptable if the flame height does not extend above the shield.	M	PASS
		1		M	PASS



**BUREAU  
VERITAS**

BV Lab Number: (5104)208-0046  
 Technician Name: DC/NS

**MC-4085-US  
 Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.5.3, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, after a 5 second burn at maximum flame height:	N/A	-
		1	When extinguished in the intended manner, shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
	ASTM F400-00, Section 3.5.4, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, when set at a flame height of 2 in. (50 mm) or the maximum flame height the adjustment allows, if lower than 50 mm, or nonadjustable premixing burner lighters at their permanently set flame heights, after a 10 second burn, when closed in the intended manner.	See Below	-
		1	Shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
Volumetric Displacement	ASTM F400-00, Section 3.6, when tested in accordance with 7.14.	1	Liquid portion of the fuel shall not exceed 85% of the volumetric capacity of the fuel chamber.	NM # 151 - 88.4%	FAIL
Drop Test	ASTM F400-00, Section 4.2.1, when tested in accordance with Section 7.4.	1	Postmixing and premixing burner lighters must be capable of withstanding three separate 5-ft. (1.5 m) drops.	See Below	-
				Test 1 23°C - 10h M # 38, 50, 51, 52, 58 Failed Safely	Test 2 -10°C - 23°C
		1	Without fuel tank fragmentation.	M	M
		1	Without resulting in sustained self-ignition.	M	M
		1	Without gas escape exceeding 15 mg/min.	M	M
		1	Without impairing the subsequent safe operation of the lighter.	M	M
	ASTM F400-00, Section 4.2.2, when tested in accordance with Section 7.3.	1	Fluid lighters must be capable of withstanding three separate 5 ft. (1.5 m) drops.	See Below	-
		1	Without fuel tank rupture.	N/A	-



**BUREAU  
VERITAS**

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

MC-4085-US

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 4.2.3	1	Without resulting in sustained self-ignition.	N/A	-
	ASTM F400-00, Section 4.3.1	1	Without impairing the subsequent safe operation of the lighter.	N/A	-
Temperature Test	ASTM F400-00, Section 4.3, when tested in accordance with Section 7.5.	1	Lighters that are still operable in the intended manner after testing, sections 4.2.1 or 4.2.2, shall be capable of meeting all the applicable requirements of section 3. Lighters shall be capable of withstanding a temperature of 131°F (55°C) for 4 hours.	M	PASS
		1	Lighters that are still operable in the intended manner shall be capable after return to 73 ± 4°F (23 ± 2°C) of meeting the applicable requirements in section 3.	M	PASS
Burning Test	ASTM F400-00, Section 4.4	1	Adjustable gas lighters set at maximum, nonadjustable gas lighters at their permanently set flame height, or fluid type lighters: Shall be capable of withstanding a burning time of 5 seconds in any hand-held attitude without evidence of any burning or distortion of components so as to cause a hazardous condition.	See Below	-
	ASTM F400-00, Section 4.4.1	1	Adjustable gas lighters set at 50 mm (2 inches) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at the permanent flame height, or fluid type lighters: Shall be capable of withstanding a burning time of 10 seconds in any hand-held attitude with the lighter in a position 45° below the horizontal with no burning or distortion of components so as to cause hazardous conditions.	See Below	-
Continuous Burn	ASTM F400-00, Section 4.5, when tested in accordance with Section 7.6.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters: Shall be capable of withstanding a continuous burning time of 2 minutes with the flame in a vertical attitude without causing a hazardous condition.	See Below	-
		1		M	PASS



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
Cycling Burn	ASTM F400-00, Section 4.6, when tested in accordance with Section 7.7.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters: Shall be capable of withstanding a burning time of 20 seconds, repeated 10 times.	See Below	-
External Finish	ASTM F400-00, Section 4.7	1	Lighters shall have no external sharp edges that could cause accidental cuts or abrasions to the consumer when handled or used in the intended manner.	M	PASS
Compatibility	ASTM F400-00, Section 4.8 when tested in accordance with 7.8 and 7.9	1	Components of gas and fluid lighters that come in contact with the fuel recommended shall not deteriorate after exposure so as to fail any of the criteria herein or allow gas to escape exceeding 15 mg/minute.	M	PASS
Pressure Tests	ASTM F400-00, Section 4.9, when tested in accordance with Section 7.10.	1	Gas lighters shall be capable of withstanding an internal pressure of two times the vapor pressure occurring at 131°F (55°C) of the fuel recommended by the manufacturer.	M	PASS
Refilling of Lighters	ASTM F400-00, Section 5.1, when tested in accordance with Section 7.11 – 7.13	1	Refillable fluid lighters shall include specific instructions and warnings as applicable in accordance with section 6.	N/A	-
	ASTM F400-00, Section 5.2, when tested in accordance with Section 7.11.	1	Refillable fluid lighters having a sealed fluid reservoir shall be free of fuel leakage from both the sealed reservoir and sealing closure.	N/A	-
	ASTM F400-00, Section 5.3	1	Refillable gas lighters shall have specific training instructions and warnings as applicable in accordance with section 6.	N/A	-
	ASTM F400-00, Section 5.4, when tested in accordance with Section 7.13.	1	Refillable gas lighters: The refilling valve in a pressurized fuel tank lighter shall be secure enough so as not to allow an escape of gas exceeding 15 mg/min.	N/A	-
Certification	16 CFR 1212	1	Certification Showing Qualification Tests For Child Resistance Has Been Conducted Using Appropriate Surrogate Lighters And Child Panels Specified In The Regulations Must Be Submitted For Verification	N/T – Per Client Request	-



**BUREAU**  
**VERITAS**

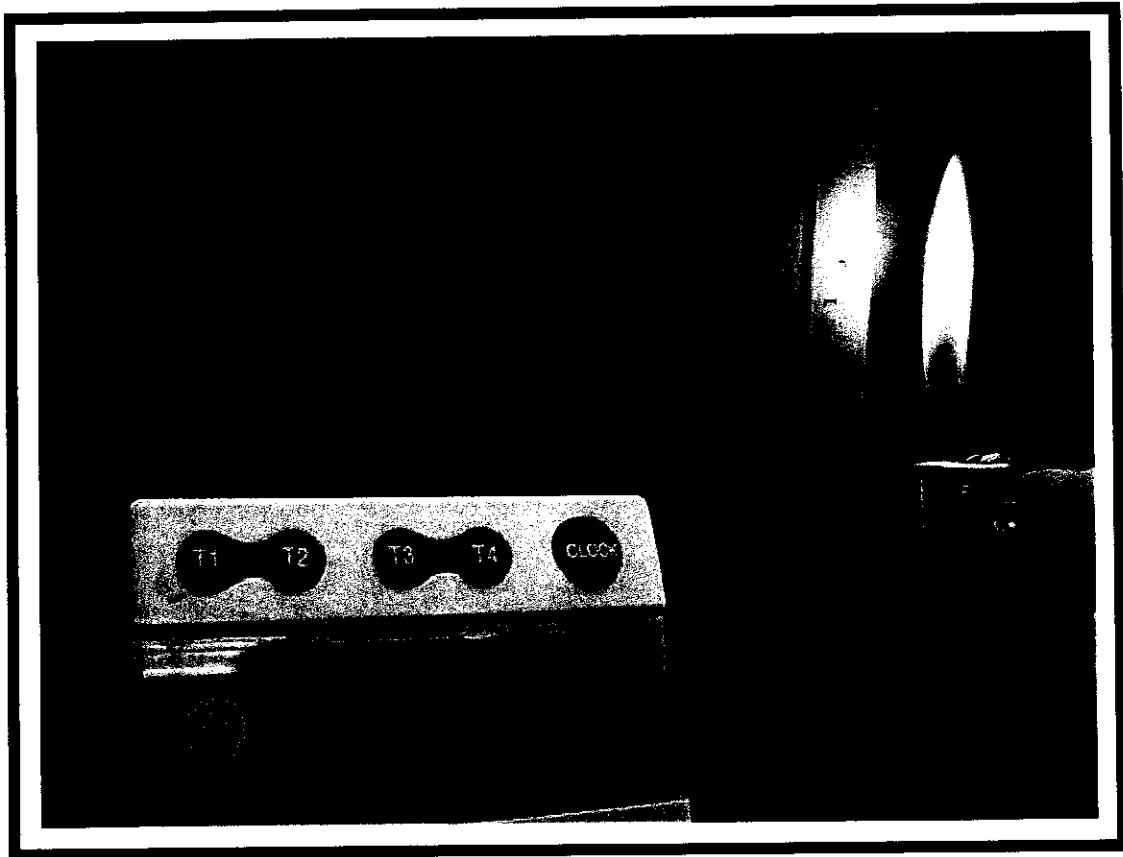
**Key:**  
M Meets NM Does Not Meet  
NA Not Applicable NT Not Tested  
\* Additional Charge For This Test \*\* Mandatory Requirement

No. Of Samples Required For Complete Testing:	20
No. Of (Fully Packed) Cartons For Transit Testing:	1
No. Of Working Days For Complete Testing:	7

BV Lab Number: (5104)208-0046  
Technician Name: DC/NS

Client Approval: June 3, 2003  
Creation Date: March 26, 2004  
Editorial Revision Date:  
Pricing Review Date:  
Technical Review Date:

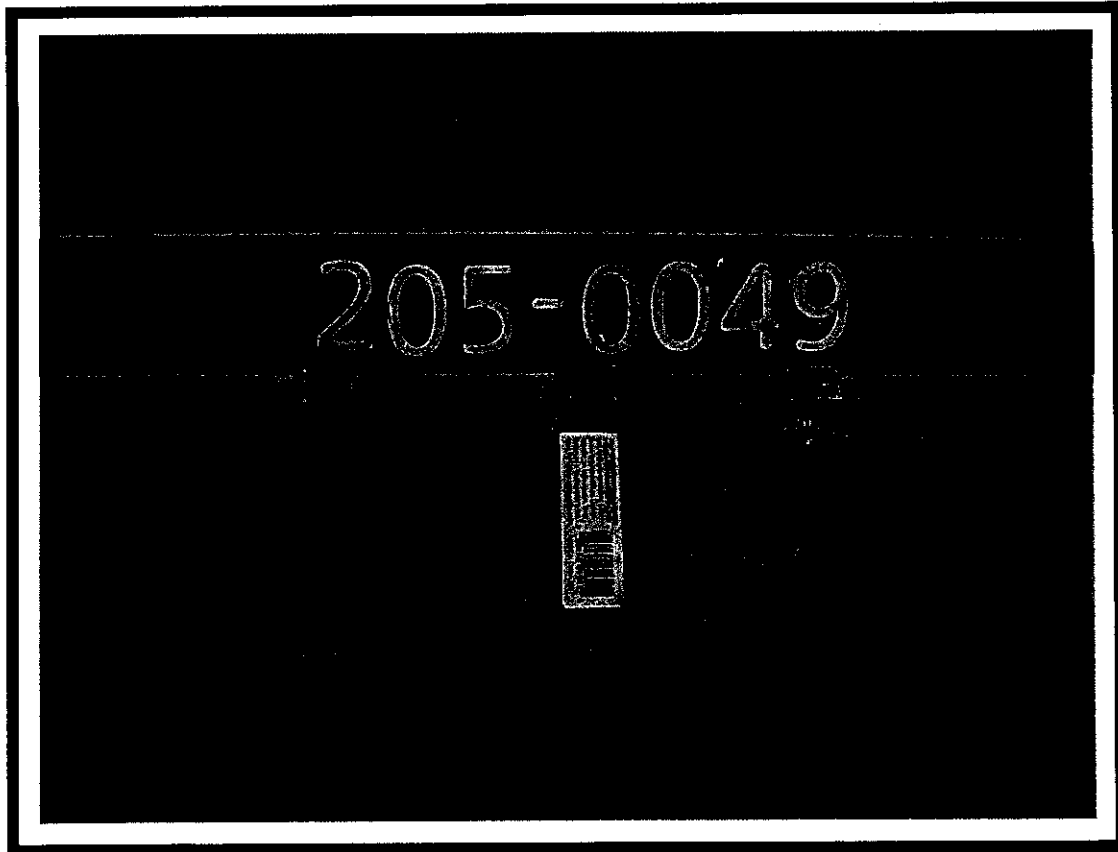
EXHIBIT #1



# REPORT

Lab Number: (5104)205-0049

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Protocol	9 Pages
0 Exhibits	N/A
Other	N/A



# TEST REPORT

LIGHTER ASSOCIATION, INC.  
 1920 N. STREET, NW  
 WASHINGTON, DC, DISTRICT OF  
 COLUMBIA, 20036 UNITED STATES

ATTN: DAVID BAKER

**LAB LOCATION:** BUFFALO -  
 HARDLINES  
**LAB NUMBER:** (US) (5104)205-0049  
**CLIENT NO.:** NOT LISTED  
**DEPARTMENT:** NOT LISTED  
**DATE IN:** JULY 23, 2004  
**DATE OUT:** AUGUST 31, 2004  
**MOD. LOG IN:** N/A  
**WORKING DAYS:** 27 DAYS  
**ADDENDUM DATE:** N/A

OVERALL RATING	
PASS	_____
CORRECTIVE ACTION REQUIRED	_____
FAIL	X

**TESTING FOR  
 DISPOSABLE LIGHTERS ( ASTM F400 )  
 MC-4085-US**

DEVELOPMENT	PRODUCTION	X	CUSTOMER COMPLAINT	OTHER
<b>Sample Description:</b> Strike N Lite Lighters				
<b>Final Packaging:</b>		Yes (submitted for review) X	No (not submitted for review)	
<b>Manufacturer:</b>		Not Listed		
<b>Country of Origin:</b>		China	<b>Style:</b>	Not Listed
<b>Color:</b>		Various	<b>SKU Number:</b>	Not Listed
<b>Re-test:</b>		Yes: <input type="checkbox"/>	No: X	<b>Charge Vendor:</b> Yes: <input type="checkbox"/>
<b>Previous Report No.:</b>		N/A		
<b>Addendum Report:</b>		Yes: <input type="checkbox"/>	No: X	
<b>Reason For Addendum:</b>		N/A		
TEST PROPERTY	PASS	C.A.R.	FAIL	COMMENTS
Labeling	X			
Physical Characteristics	X			
Construction Qualities			X	
Performance			X	
Analytical				Not Tested

**EXECUTIVE SUMMARY:** At the request of the client, submitted samples were tested per ASTM F400. All sections of the standard were evaluated, except Child Resistance per client request.

The samples provided received a FAIL rating for the following reason :

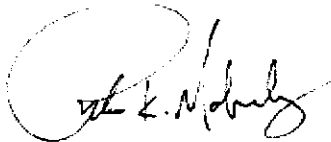
**Performance :**

- Section 3.6 – Lighter #151 had volumetric capacity of 93.1%. Requirement – Liquid portion of fuel shall not exceed 85% of the volumetric capacity.

**RECOMMENDATION FOR IMPROVEMENT:**

- Provide a sample that meets the Performance requirements.

Bureau Veritas  
Consumer Products Services, Inc.



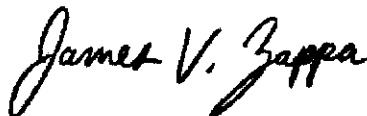
Rufus K. Moberly  
Associate Product Test Engineer,  
Hardlines Department  
Technical Consulting and Support Services

Bureau Veritas  
Consumer Products Services, Inc.



Glenn Sylvia  
V.P. of Hardlines

Bureau Veritas  
Consumer Products Services, Inc.



James V. Zappa  
Product Test Engineer  
Hardlines Department  
Technical Consulting and Support Services



**BUREAU  
VERITAS**

BV Lab Number: (5104)205-0049  
 Technician Name: DC/NS  
 Test Date: July 27, 2004  
 Reviewed By/Date: RKM 8/30/04

**BUREAU VERITAS TEST PROTOCOL FOR  
MC-4085-US**

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>LABELING</b>					
Instructions and Warnings	ASTM F400-00, Section 6.1	All	All lighters shall be accompanied by the appropriate instructions or warnings, or both, communicating proper method of use.	M	PASS
	ASTM F400-00, Section 6.2	All	This safety information shall be conspicuously placed on the product or on a separate brochure or pamphlet packaged with the lighters or on a product packaging at the point of sale with contrasting background color, type size, or style that makes it distinct from other information.	M	PASS
	ASTM F400-00, Section 6.3	All	For all lighters, the safety information shall be accompanied in close proximity by the specific signal word "WARNING."	M	PASS
	ASTM F400-00, Section 6.4	All	For all lighters, the safety information shall contain the following statements:	See Below	-
	ASTM F400-00, Section 6.4.1	All	"Keep away from children" or "keep out of reach of children"	M	PASS
	ASTM F400-00, Section 6.4.2	All	Ignite lighter away from face and clothing.	M	PASS
	ASTM F400-00, Section 6.5	All	Use one of the following as appropriate for the lighter type:	See Below	-
	ASTM F400-00, Section 6.5.1	All	Be sure flame is out after use. (Self-extinguishing lighters)	M	PASS
	ASTM F400-00, Section 6.5.2	All	This lighter does not self-extinguish; close cover to put out. (Non-self-extinguishing lighters)	N/A	-
	ASTM F400-00, Section 6.6	All	For all lighters, the safety information may include the substance of the following as appropriate for the lighter type: Contains flammable gas under pressure.	See Below	-
	ASTM F400-00, Section 6.6.1	All	Contains flammable fluid.	M	PASS
	ASTM F400-00, Section 6.6.2	All	When filled, will contain flammable fluid.	N/A	-
	ASTM F400-00, Section 6.6.3	All	Never expose to heat above 120°F (49°C) or to prolonged sunlight.	N/A	-
	ASTM F400-00, Section 6.6.4	All	Never puncture or put in fire.	M	PASS
	ASTM F400-00, Section 6.6.5	All		M	PASS



**BUREAU  
VERITAS**

BV Lab Number: (5104)205-0049  
 Technician Name: DC/NS

**MC-4085-US  
 Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 6.6.6	All	Extreme heat is present above the visible flame. Extra care should be taken to prevent burn injury or fire. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.6.7	All	Do not keep lit for more than 10 seconds. (premixing burner lighters)	N/A	-
	ASTM F400-00, Section 6.7	All	Refillable gas lighters shall be accompanied by specific instructions as to the correct procedure to accomplish the refill operation, including type of fuel recommended.	N/A	-
	ASTM F400-00, Section 6.8.1	All	Fluid lighters shall be accompanied by the substance of the following:	See Below	-
	ASTM F400-00, Section 6.8.1.1	All	Fill only with the type of fluid recommended by the manufacturer.	N/A	-
	ASTM F400-00, Section 6.8.1.2	All	Fill slowly, never overfill.	N/A	-
	ASTM F400-00, Section 6.8.1.3	All	Wipe lighter and hands dry before igniting.	N/A	-
Product Markings	ASTM F400-00, Section 8	All	All lighters shall bear a permanent logo or name that identifies the manufacturer or distributor.	M	PASS
<b>PACKAGING</b>					
Retail Shelf Packaging	TM-HL-0002	All	Shall have final retail shelf packaging with scannable UPC stamp/label. Scanned numbers shall match as per supplied UPC label.	080692040010	PASS
<b>PHYSICAL CHARACTERISTICS</b>					
Dimensions (if Specified)	TM-HL-0001	1	Report overall dimensions.	3 1/4" x 1" x 1/2"	-
Weight (if Specified)	TM-HL-0001	1	Report weight.	18.0g	-
<b>CONSTRUCTION &amp; WORKMANSHIP</b>					
Defects	TM-HL-0002	All	Shall be free of aesthetic defects and shall meet the structural requirements as tested under IV, Performance.	M	PASS



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

**MC-4085-US**  
**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
<b>PERFORMANCE</b>					
Flame Generation	ASTM F400-00, Standard Consumer Safety Specification for Lighters	1	Lighters shall require a deliberate manual operation to produce a flame. These operations shall conform to at least one of the following requirements:	See Below	-
	ASTM F400-00, Section 3.1.1	1	A system such that positive action on the part of the consumer is required to generate and maintain a flame.	M	PASS
	ASTM F400-00, Section 3.1.2	1	A system that requires two or more independent motions to generate a flame.	M	PASS
	ASTM F400-00, Section 3.1.3	1	A system that requires an actuating force equal to or greater than 3.4 lbf (15 N) to generate a flame.	N/T	-
Flame Control	ASTM F400-00, Section 3.2	1	The maximum attainable flame height for lighters shall be limited with a setting or by product design, or both.	M	PASS
	ASTM F400-00, Section 3.2.1 when tested in accordance with 7.1.	1	Nonadjustable fluid lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm).	N/A	-
	ASTM F400-00, Section 3.2.2 when tested in accordance with 7.1.	1	Nonadjustable postmixing and premixing burner lighters:	See Below	-
		1	Shall have a maximum attainable flame height of no more than 2 in. (50 mm).	N/A	-
	ASTM F400-00, Section 3.2.3 when tested in accordance with 7.1.	1	Adjustable postmixing burner Lighters:	See Below	-
		1	Shall not be capable of producing a flame height greater than 4.75 in. (120 mm) when deliberately adjusted by the consumer for maximum flame height.	M	PASS
	ASTM F400-00, Section 3.2.4, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	See Below	-



**BUREAU  
VERITAS**

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

**MC-4085-US  
Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	Shall not be capable of producing a flame height in excess of 3 in. (75 mm) when deliberately adjusted by the consumer for maximum flame height.	N/A	-
	ASTM F400-00, Section 3.2.5, when tested in accordance with 7.1.	1	Adjustable postmixing burner lighters:	See Below	-
		1	The first strike will not produce a flame height in excess of 4 in. (100 mm).	M	PASS
	ASTM F400-00, Section 3.2.6, when tested in accordance with 7.1.	1	Adjustable premixing burner lighters:	See Below	-
		1	The first strike will not produce a flame height in excess of 2.5 in. (60 mm).	N/A	-
	ASTM F400-00, Section 3.2.7, when tested in accordance with 7.1.	1	All adjustable flame height lighters:	See Below	-
		1	Shall not be capable of producing a flame height in excess of 2 in. (50 mm) when set at the lowest possible flame height.	M	PASS
Flame Height Adjustment	ASTM F400-00, Section 3.3	1	Adjustable lighters shall require a deliberate manual operation to increase the flame height when the lighter is used in the normal fashion.	M	PASS
	ASTM F400-00, Section 3.3.1	1	Flame control actuators protrude from the body of the lighter. Shall require a minimum actuating force of 0.25 lbf (1 N) applied over the entire range of adjustment in a tangential direction.	M	PASS
	ASTM F400-00, Section 3.3.2	1	Adjustable gas lighters having rotary movement flame control actuators approximately at right angles to the flame shall perform as follows:	See Below	-
	ASTM F400-00, Section 3.3.2.1	1	The flame control actuator is at the top of the lighter.	M	PASS
		1	Moving the actuator to the left shall produce a decrease in flame height.	M	PASS
	ASTM F400-00, Section 3.3.2.2	1	The flame control actuator is at the bottom of the lighter.	N/A	-
		1	A clockwise movement shall produce a decrease in flame height.	N/A	-



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

MC-4085-US

Disposable Lighters (ASTM F400)

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.3.3	1	Adjustable gas lighters requiring motion of the flame control actuator approximately parallel to the flame axis shall decrease or increase the flame height according to the direction of the movement.	N/A	-
	ASTM F400-00, Section 3.3.4	1	Adjustable flame height lighters.	See Below	-
		1	Shall indicate the direction of movement to produce a higher or lower flame height.	M	PASS
	ASTM F400-00, Section 3.3.4	1	On lighters whose adjusting mechanisms conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter or may be of a nonpermanent tag or stick-on label, in the vicinity of the adjusting mechanism and be readily visible and understandable.	M	PASS
	ASTM F400-00, Section 3.3.5	1	On lighters whose adjusting mechanisms do not conform to sections 3.3.2 and 3.3.3, the direction of movement shall be permanently imprinted or engraved on the lighter, in the vicinity of the adjusting mechanism and be readily visible and understandable.	N/A	-
Spitting or Sputtering and Flaring	ASTM F400-00, Section 3.4, when tested in accordance with 7.2.	1	Gas lighters when set at the maximum flame height, shall exhibit no spitting or sputtering, or flaring.	M	PASS
Flame Extinction	ASTM F400-00, Section 3.5.1, when tested in accordance with 7.3	1	Adjustable postmixing burner lighters, after a 5-second burn at maximum flame height, when extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds.	M	PASS
	ASTM F400-00, Section 3.5.2, when tested in accordance with 7.3.	1	Adjustable postmixing burner lighters at a flame height of 2 in. (50 mm), or the maximum height of adjustment allows, or nonadjustable postmixing burner lighters at their permanently set flame heights, after a 10 second burn: When extinguished in the intended manner, shall have any exposed flame completely extinguished within 2 seconds after such action is completed.	See Below	-
		1	For gas lighters that have shields, an additional 2 second afterburn is acceptable if the flame height does not extend above the shield.	M	PASS
		1		M	PASS



**BUREAU  
VERITAS**

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

**MC-4085-US  
Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
	ASTM F400-00, Section 3.5.3, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, after a 5 second burn at maximum flame height:	N/A	-
		1	When extinguished in the intended manner, shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
	ASTM F400-00, Section 3.5.4, when tested in accordance with 7.3.	1	Adjustable premixing burner lighters, when set at a flame height of 2 in. (50 mm) or the maximum flame height the adjustment allows, if lower than 50 mm, or nonadjustable premixing burner lighters at their permanently set flame heights, after a 10 second burn, when closed in the intended manner:	See Below	-
		1	Shall have any exposed flame completely extinguished in no more than 5 seconds.	N/A	-
Volumetric Displacement	ASTM F400-00, Section 3.6, when tested in accordance with 7.14.	1	Liquid portion of the fuel shall not exceed 85% of the volumetric capacity of the fuel chamber.	NM 93.1%	FAIL
Drop Test	ASTM F400-00, Section 4.2.1, when tested in accordance with Section 7.4.	1	Postmixing and premixing burner lighters must be capable of withstanding three separate 5-ft. (1.5 m) drops.	See Below	-
		1	Without fuel tank fragmentation.	23°C M	-10°C M PASS
		1	Without resulting in sustained self-ignition.	M	M PASS
		1	Without gas escape exceeding 15 mg/min.	M	M PASS
		1	Without impairing the subsequent safe operation of the lighter.	M	M PASS
	ASTM F400-00, Section 4.2.2, when tested in accordance with Section 7.3.	1	Fluid lighters must be capable of withstanding three separate 5 ft. (1.5 m) drops.	See Below	-
		1	Without fuel tank rupture.	N/A	-
	ASTM F400-00, Section 4.2.3	1	Without resulting in sustained self-ignition.	N/A	-





**BUREAU**  
**OF STANDARDS**

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

MC-4085-US

Disposable Lighters (ASTM F400)

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
		1	Without impairing the subsequent safe operation of the lighter.	N/A	-
	ASTM F400-00, Section 4.3.1	1	Lighters that are still operable in the intended manner after testing, sections 4.2.1 or 4.2.2, shall be capable of meeting all the applicable requirements of section 3.	N/A	-
Temperature Test	ASTM F400-00, Section 4.3, when tested in accordance with Section 7.5.	1	Lighters shall be capable of withstanding a temperature of 131°F (55°C) for 4 hours.	M	PASS
		1	Lighters that are still operable in the intended manner shall be capable after return to 73 ± 4°F (23 ± 2°C) of meeting the applicable requirements in section 3.	M	PASS
Burning Test	ASTM F400-00, Section 4.4	1	Adjustable gas lighters set at maximum, nonadjustable gas lighters at their permanently set flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a burning time of 5 seconds in any hand-held attitude without evidence of any burning or distortion of components so as to cause a hazardous condition.	M	PASS
	ASTM F400-00, Section 4.4.1	1	Adjustable gas lighters set at 50 mm (2 inches) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at the permanent flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a burning time of 10 seconds in any hand-held attitude with the lighter in a position 45° below the horizontal with no burning or distortion of components so as to cause hazardous conditions.	M	PASS
Continuous Burn	ASTM F400-00, Section 4.5, when tested in accordance with Section 7.6.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters:	See Below	-
		1	Shall be capable of withstanding a continuous burning time of 2 minutes with the flame in a vertical attitude without causing a hazardous condition.	M	PASS
Cycling Burn	ASTM F400-00, Section 4.6, when tested in accordance with Section 7.7.	1	Adjustable gas lighters, with flame set at 2 inches (50 mm) or the maximum flame height the adjustment allows if lower than 50 mm, nonadjustable gas lighters set at permanent flame height, or fluid type lighters:	See Below	-



**BUREAU**  
**VERITAS**

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

**MC-408S-US**

**Disposable Lighters (ASTM F400)**

Evaluation	Citation/Method	No. Samples	Criteria	Results	Rating
External Finish	ASTM F400-00, Section 4.7	1	Shall be capable of withstanding a burning time of 20 seconds, repeated 10 times.	M	PASS
Compatibility	ASTM F400-00, Section 4.8 when tested in accordance with 7.8 and 7.9	1	Lighters shall have no external sharp edges that could cause accidental cuts or abrasions to the consumer when handled or used in the intended manner.	M	PASS
Pressure Tests	ASTM F400-00, Section 4.9, when tested in accordance with Section 7.10.	1	Components of gas and fluid lighters that come in contact with the fuel recommended shall not deteriorate after exposure so as to fail any of the criteria herein or allow gas to escape exceeding 15 mg/minute.	M	PASS
Refilling of Lighters	ASTM F400-00, Section 5.1, when tested in accordance with Section 7.11 - 7.13	1	Gas lighters shall be capable of withstanding an internal pressure of two times the vapor pressure occurring at 131°F (55°C) of the fuel recommended by the manufacturer.	M	PASS
	ASTM F400-00, Section 5.2, when tested in accordance with Section 7.11.	1	Refillable fluid lighters shall include specific instructions and warnings as applicable in accordance with section 6.	N/A	-
	ASTM F400-00, Section 5.3	1	Refillable gas lighters shall have specific training instructions and warnings as applicable in accordance with section 6.	N/A	-
	ASTM F400-00, Section 5.4, when tested in accordance with Section 7.13.	1	Refillable gas lighters: The refilling valve in a pressurized fuel tank lighter shall be secure enough so as not to allow an escape of gas exceeding 15 mg/min.	N/A	-
Certification	16 CFR 1212	1	Certification Showing Qualification Tests For Child Resistance Has Been Conducted Using Appropriate Surrogate Lighters And Child Panels Specified In The Regulations Must Be Submitted For Verification	N/T - Per Client Request	-

**Key:**  
M Meets  
NA Not Applicable  
NM Does Not Meet  
NT Not Tested



**BUREAU**  
**VERITAS**  
\*

Additional Charge For This Test \*\* Mandatory Requirement

No. Of Samples Required For Complete Testing:	20
No. Of (Fully Packed) Cartons For Transit Testing:	1
No. Of Working Days For Complete Testing:	7

BV Lab Number: (5104)205-0049  
Technician Name: DC/NS

Client Approval: June 3, 2003  
Creation Date: March 26, 2004  
Editorial Revision Date:  
Pricing Review Date:  
Technical Review Date: