



WUXIANG

Shenzhen Wuxiang Testing (Group) Co., Ltd Report No. WUX202402290980UL

APPLICATION FOR TEST REPORT

UL 147

On Behalf of

Prepared For: Wenzhou ZHONGBANG Smoking Sets Manufacturing Co.,Ltd
Address: North Head, Floor 1-4, Building 1, No. 37, Jinda Road, Xinqiao Street,
Ouhai District, Wenzhou City, Zhejiang Province

Product Name: Lighter
Model: ZB-588, ZB-198, ZB-325, ZB-551, ZB-990A
Trade mark: /

Manufacturer: Wenzhou ZHONGBANG Smoking Sets Manufacturing Co.,Ltd
Address: North Head, Floor 1-4, Building 1, No. 37, Jinda Road, Xinqiao Street,
Ouhai District, Wenzhou City, Zhejiang Province

Prepared By: Shenzhen Wuxiang Testing (Group) Co., Ltd
Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District,
Shenzhen, China

Test Date: February 29, 2024 to April 07, 2024
Date of Report: April 07, 2024
Report No.: WUX202402290980UL



**WUXIANG**

Shenzhen Wuxiang Testing (Group) Co., Ltd

Report No. WUX202402290980UL

UL 147 TEST REPORT

Standard: <u>UL147</u>			
Report No.:	WUX202402290980UL	Client:	Wenzhou ZHONGBANG Smoking Sets Manufacturing Co.,Ltd
Product:	Lighter	Rated input	--
Project Engineer:	Tony Bi	Rated output	--
Test Engineer:	Lucy Lu	Protection class	--
Application Date	February 29, 2024	Protection against moisture:	--
Requested Date	April 07, 2024	Construction:	Butane
Re-test	☐	Operation mode	Continuous
Full-test	☒	Weight:	<0.5kg
Model/ type reference:	ZB-588	Sample No.	1#, 2#
Should the heating test be done in heating oven?	☐ Yes °C ☒ No		
Altitude during operation (m)	☐ Up to 2000 ☒ No		
Altitude of test laboratory (m)	☒ below 2000 ☐ No		
Other information:.....			

Lab Use Only			
Lab Start Date	February 29, 2024	Lab Finish Date	April 07, 2024
Ambient Temperature, °C	24.1	Relative Humidity, %	49.1

Remarks:

Tested by:

Checked by:

****Modified History****

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	2024/04/07	Lucy Lu



Test Item:

Sub-Clause	Test		Result
2.1	Components	butane	Pass
3	Operating Instructions	In manual	Pass
4	Service Pressure Ratings	More than the vapor pressure of the fuel gas at 130°F	Pass
5	Assembly	With flow regulation and positive fuel shutoff, Non-refillable	Pass
5.1	torch unit	a valve body assembly burner tube, orifice(s), and burner head(s)	Pass
5.2	maximum size	> 4.0 fluid ounces	Pass
5.3	the shutoff valve control is not likely to be unintentionally moved to the on position with the cap		Pass
5.9	components	No such fuse	Pass
	LP-gas hose assembly – Standard for LP-Gas Hose	UL 21	Pass
	Gas regulator	UL 144	Pass
6	Connections		Pass
	Gas Cylinder Valve Outlet and Inlet Connections	ANSI/CGA V-1	Pass
	LP-Gas hose	Type I ANSI/CGA V-1	Pass
7	Materials	Polymeric materials V-0 corrosion-resistant protective coating	Pass
9	Filling Procedure Test		N/A
10	Pressure Test		Pass
11	Leakage Test		Pass
12	Drop Test		N/A
13	Operation Test		Pass
14	Flame Flare-Up Test		Pass
15	Valve-Endurance Test		Pass
16	Temperature Test		Pass



Sub-Clause	Test		Result
17	Fire Tests on Torch Units with Integral Containers		Pass
18	Hydrostatic Pressure Strength Test		N/A
19	Sustained Pressure Test		Pass
20	Moist Ammonia-Air Stress Cracking Test		N/A
21	Accelerated Aging Test		Pass
22	Fuel Gas Compatibility		Pass
24	MARKING		Pass
25	INSTRUCTIONS		Pass
26	Important Safeguards		Pass

**Filling Procedure Test (9)**

9	Button test		N/A
Test part:		Filling	Result
Integral container, 1#		Yes/No	--
Integral container, 2#		Yes/No	--
And test Pressure			

10	Pressure		N/A
Test part:		Parts for testing	Result
Sample 1#		Integral container	No external leakage
Sample 2#		Integral container	No external leakage
subjected to a water bath maintained at 130°F (54.4°C),			

**Pressure Test (10)**

10	Pressure test		Pass
Test part:	Parts for testing	Result	
Sample 1#	Integral container	No external leakage	
Sample 2#	Integral container	No external leakage	
subjected to a water bath maintained at 130°F (54.4°C), the burner shutoff valve is to be in the closed position.			

Leakage Test (11)

Leakage Test (11)			
11	Pressure test		Pass
Test part:	Parts for testing	Result	
Sample 1#	Integral container	No external leakage	
Sample 2#	Integral container	No external leakage	
An internal aerostatic pressure of not less than 1-1/2times the service pressure specified in Service Pressure Ratings.			

**Drop test (12)**

12	TABLE: Drop Test				Pass
Model	Test location	Test temperature (° C)	Duration (h)	Results	
--	container	25	1.2m	No cracking, splitting, rupture and leak externally.	
--	container	25	1.2m	No cracking, splitting, rupture and leak externally.	
Remark: Before drop test. Two samples in a circulating air oven. Two sample in oven at 100℃。					

**Operation Test (13)**

13	Operation	Pass	
Model tested:		Work time	Remarks
Sample 1#		10mins	Normal work
Sample 2#		10mins	Normal work
--		--	--
After pressure test.			

Flame Flare-Up Test (14)

Pull Location	Samples	hight	Limit	Pass	
				Pass	Fail
flame Length	1#	<150%	150%	Pass	--
flame Length	2#	<150%	150%	Pass	

**Valve-Endurance Test (15)**

15	Valve-Endurance test		Pass
Test part:		Times	Result
Burner shutoff valve 1#		1500 cycles	Still can work, No damaged
Burner shutoff valve 2#		1500 cycles	Still can work, No damaged
--			

11	Leakage Test		Pass
Test part:		Parts for testing	Result
Sample 1#		Integral container	No external leakage
Sample 2#		Integral container	No external leakage
An internal aerostatic pressure of not less than 1-1/2times the service pressure specified in Service Pressure Ratings.			



Temperature Test (16)

Method:

The torch assembly is to be arranged on a wooden platform.

The temperatures are to be monitored as the burner valve is manipulated to determine the position at which the highest temperatures are achieved.

The torch is then to be connected to a new container of fuel and operated at that flow setting until all fuel is exhausted or for 8 hours, whichever comes first, or when the operating pressure drops below that recommended by the manufacturer as stated in their instruction manual.

Result:

16	TABLE: Thermal requirements,						Pass
	Supply voltage (V)	--	--	--	--	--	—
	Ambient Tmin (°C)	24.1	--	--	--	--	—
	Ambient Tmax (°C)	24.2	--	--	--	--	—
	Max. load	Max. Temperature	--	--	--	--	
	Sample	1#	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Surface of enclosure		33.1	--	--	--	--	35
Plastic of Top		30.4	--	--	--	--	35
Metal part		29.5	--	--	--	--	30
Bottom		30.5	--	--	--	--	35
Burner shutoff valve		29.9					50
control knob		29.3					50
Supplementary information:							



Temperature Test (16)

Method:

The torch assembly is to be arranged on a wooden platform.

The temperatures are to be monitored as the burner valve is manipulated to determine the position at which the highest temperatures are achieved.

The torch is then to be connected to a new container of fuel and operated at that flow setting until all fuel is exhausted or for 8 hours, whichever comes first, or when the operating pressure drops below that recommended by the manufacturer as stated in their instruction manual.

Result:

16	TABLE: Thermal requirements,						Pass
	Supply voltage (V)	--	--	--	--	--	—
	Ambient Tmin (°C)	24.4	--	--	--	--	—
	Ambient Tmax (°C)	24.9	--	--	--	--	—
	Max. load	Max. Temperature	--	--	--	--	
	Sample	2#	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Surface of enclosure		30.4	--	--	--	--	35
Plastic of Top		31.9	--	--	--	--	35
Metal part		27.7	--	--	--	--	30
Bottom		31.6	--	--	--	--	35
Burner shutoff valve		32.9					50
control knob		31.8					50
Supplementary information:							



Temperature Test (16)

Method:

The torch assembly is to be arranged on a wooden platform.

The temperatures are to be monitored as the burner valve is manipulated to determine the position at which the highest temperatures are achieved.

The torch is then to be connected to a new container of fuel and operated at that flow setting until all fuel is exhausted or for 8 hours, whichever comes first, or when the operating pressure drops below that recommended by the manufacturer as stated in their instruction manual.

Result:

16	TABLE: Thermal requirements,						Pass
	Supply voltage (V)	--	--	--	--	--	—
	Ambient Tmin (°C)	24.2	--	--	--	--	—
	Ambient Tmax (°C)	24.9	--	--	--	--	—
	Max. load	Max. Temperature	--	--	--	--	
	Sample	3#	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Surface of enclosure		28.6	--	--	--	--	35
Plastic of Top		31.3	--	--	--	--	35
Metal part		32.2	--	--	--	--	30
Bottom		30.8	--	--	--	--	35
Burner shutoff valve		30.9					50
control knob		30.7					50
Supplementary information:							



Fire Tests on Torch Units with Integral Containers (17)

Method:

-Nine samples of the torch assembly, fully charged, are to be used. A charcoal fire, 24 by 18 by 6 inches (610 by 457 by 152 mm) high, is to be prepared within a 3-sided concrete-block enclosure. The top and one long side of the enclosure are to be open for observation.

-A metal wire screen is to be placed on top of the charcoals, in which the samples shall be placed.

The ambient temperature shall be measured in the air space between the screen and the charcoals, below the sample. The temperature during the test shall be between 1000 and 1200°F (537 and 649°C).

-The samples shall be individually tested in the charcoal fire in various positions and orientations that shall include vertical up, vertical down, and horizontal. The test shall be conducted until the entire contents of the container have been exhausted

17	Fire Tests	Pass
Test Sample No.:	Temperature °C	Result
Sample 4#	566	No hazards
Sample 5#	574	No hazards
Sample 6#	603	No hazards
Sample 7#	558	No hazards
Sample 8#	606	No hazards
Sample 9#	583	No hazards
Sample 10#	589	No hazards
Sample 11#	566	No hazards
Sample 12#	609	No hazards
--		

**Hydrostatic Pressure Strength Test (18)**

18	Pressure Strength Test		N/A
Test part:		Parts for testing	Result
Sample 1#		Integral container	No rupture
Sample 2#		Integral container	No rupture
Sample 3#		Integral container	No rupture
Sample 13#		Integral container	No rupture
Sample 14#		Integral container	No rupture
Sample 15#		Integral container	No rupture
Sample 16#		Integral container	No rupture
Sample 17#		Integral container	No rupture
Sample 18#		Integral container	No rupture
Sample 19#		Integral container	No rupture
Sample 20#		Integral container	No rupture
Sample 21#		Integral container	No rupture
Sample 22#		Integral container	No rupture
Sample 23#		Integral container	No rupture
Sample 24#		Integral container	No rupture
Sample 25#		Integral container	No rupture
Sample 26#		Integral container	No rupture
Sample 27#		Integral container	No rupture
13#-17#, Five samples are to be tested in the ² as received ² condition.			
18#-22#, Five samples subjected to air oven aging for 30 days at 100°C.			
23#-27#, Five samples filled with n-hexane or butane, pressurized to 276 kPa at 23°C.			
Test time 1min.			

**Sustained Pressure Test (19)**

19	Sustained Pressure Test		N/A
Test part:	Parts for testing	Result	
Sample 28#	Integral container	>700kPa	
Sample 29#	Integral container	>700kPa	
Sample 30#	Integral container	>700kPa	
Sample 31#	Integral container	>700kPa	
Sample 32#	Integral container	>700kPa	
Sample 33#	Integral container	>700kPa	
Sample 34#	Integral container	>700kPa	
Sample 35#	Integral container	>700kPa	
Sample 36#	Integral container	>700kPa	
Sample 37#	Integral container	>700kPa	
Sample 38#	Integral container	>700kPa	
Sample 39#	Integral container	>700kPa	
Sample 40#	Integral container	>700kPa	
Sample 41#	Integral container	>700kPa	
Sample 42#	Integral container	>700kPa	
Sample 43#	Integral container	>700kPa	
Sample 44#	Integral container	>700kPa	
Sample 45#	Integral container	>700kPa	
Sample 46#	Integral container	>700kPa	
-Twenty-four samples of the torch assembly will be required. Based upon test methods similar to those described in the Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure, ASTM D1598, samples of the torch assembly with appropriate fittings are to be connected to a hydrostatic test apparatus. One set of samples is to be subjected to slowly increasing internal pressure until rupture occurs.			

**Moist Ammonia-Air Stress Cracking Test (20)**

20	Moist Ammonia-Air Stress Cracking Test		N/A
Test part:		Parts for testing	Result
--		--	--
--		--	--
--		--	--
-Fuel-confining brass part			

**Accelerated Aging Test (21)**

21	Accelerated Aging Test	Pass	
Test Temperature (°C)..... :		100	
Requirement		Result	Remarks
Crack		Yes / No	--
Test 70 house			



Photo documentation

Photo 1 Overall view



Photo 2 Overall view



***** End of Report *****