

ivm Test Report

On the Conformity of Lighters with EN 13869 (2016) for child-resistance

Test Object

Flint Gas Lighter XHF-8177 / XHF-8178

alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)

Customer

Publik d.o.o., Valjevo, Serbia



ivm Institut Verpackungsmarktforschung GmbH
Friedrich-Seele-Straße 20
38122 Braunschweig
Germany

www.ivm-childsafe.de

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1 Introductory Note

This test report confirms the conformity of lighters with **EN 13869** to child resistance.

The test report has been prepared by

ivm Institut Verpackungsmarktforschung GmbH
Friedrich-Seele-Straße 20
38122 Braunschweig
Germany.

ivm is accredited in accordance with ISO/IEC 17025 as a testing laboratory by the German Accreditation Body (DAkKS) and registered under No.: D-PL-14061-01-00.

The child panel test with lighters based on the standardized procedure according to **EN 13869 (2016)**.

This test report describes the test procedure and the test results in accordance with the requirements of the above-mentioned standard in the chapter 4.

The test results and the confirmation of conformity with the standard only apply to the tested lighter in unchanged form, defined by dimensions, weight, volume, material, specifications, etc., amendments are valid only if made in writing. The agreements signed between the customer and **ivm** in this context are binding.

Additional information that was obtained during the test procedure but is not part of the test results is documented separately. A summary is given in the chapter "Brief Test Report".

The test report documents and attachments may be published only in unchanged form. Excerpts may not be published without the permission of **ivm**. All records of the test process are stored at **ivm** and may be inspected by authorized persons upon request.

2 Test Report – General

2.1 Tested Lighter

In accordance with EN 13869, the previous test results are also valid for the lighter “FUEGO Item No. 21.010.XX (WHERE XX=00-99)” used from Publik d.o.o., Valjevo, Serbia and are part of this report.

2.2 Manufacturer / Supplier

The lighters were made available by:

Publik d.o.o.
Vladike Nikolaja 469
14 000 Valjevo
Serbia

2.3 Test Period

The lighter has been tested in September 2023 by children.

2.4 Test and Supervisory Personnel

The child tests were conducted by trained **ivm** testers Bettina Heming, Britta Schebesta and Mandy Schlopath in Braunschweig and its environs.

The tests were organized and supervised by Stephanie Georg, Head of **ivm** test laboratory.

2.5 Description of the Tested Lighter Model

The tested lighters are flint gas lighters with a friction wheel mechanism. The dimensions of the lighters are height: 78.7 mm, width: 22.7 mm and depth: 10.9 mm. The empty lighter has a weight of approx. 13.2 grams. The child-resistant function is achieved by a mechanism which requires the friction wheel to be pressed down and turned simultaneously to operate the lighter.

The documents listed as follows describe the tested lighter and were provided by the customer. Technical drawings and material specifications (chapter 2.5.1) and photos taken by **ivm** (chapter 2.5.2) are used for identification.

The continuous production of the lighter is regularly checked by the customer and his suppliers for compliance with the features documented here. The validity of the test results and compliance with the requirements of the test standard can only be assumed if the lighters produced matches the features documented here.

2.5.1 Material Description and Dimensions

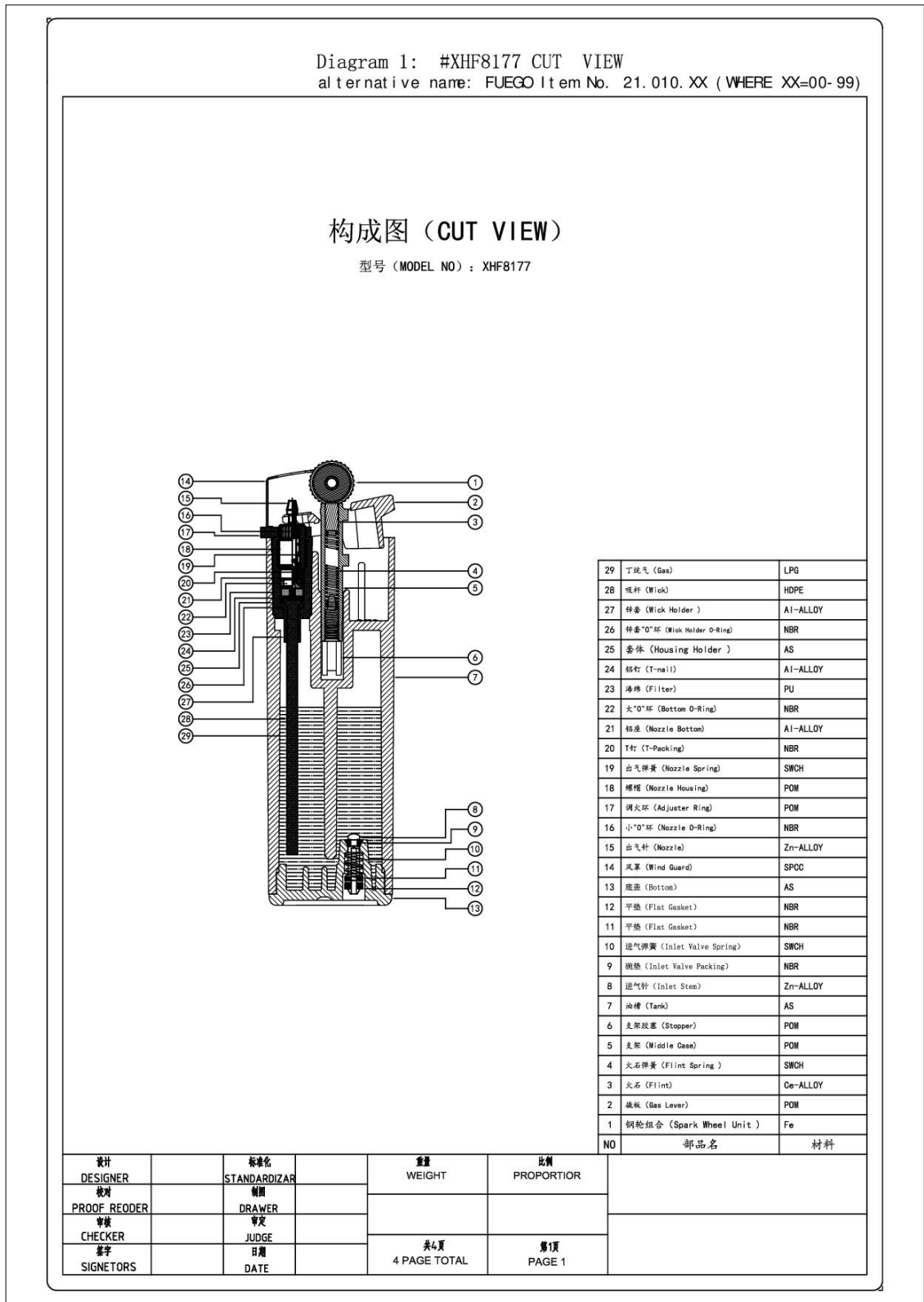
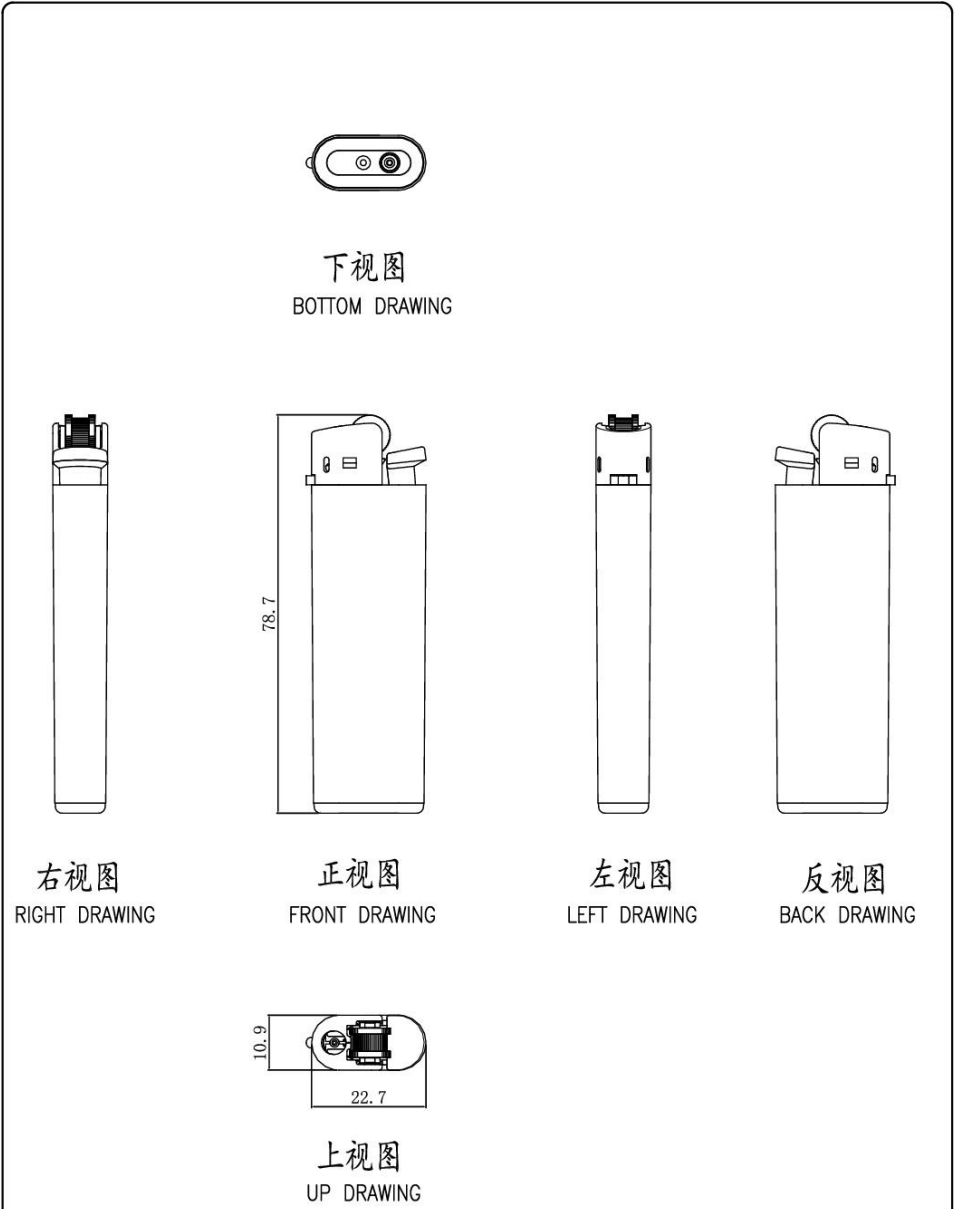


Diagram 2: #XHF8177 CHILD RESISTANCE LIGHTER
alternative name: FUEGO Item No. 21. 010. XX (WHERE XX=00- 99)



设计 DESIGNER		标准化 STANDARDIZAR		重量 WEIGHT	比例 PROPORTIOR	
校对 PROOF REODER		制图 DRAWER				
审核 CHECKER		审定 JUDGE				
签字 SIGNETORS		日期 DATE		共4页 4 PAGE TOTAL	第2页 PAGE 2	

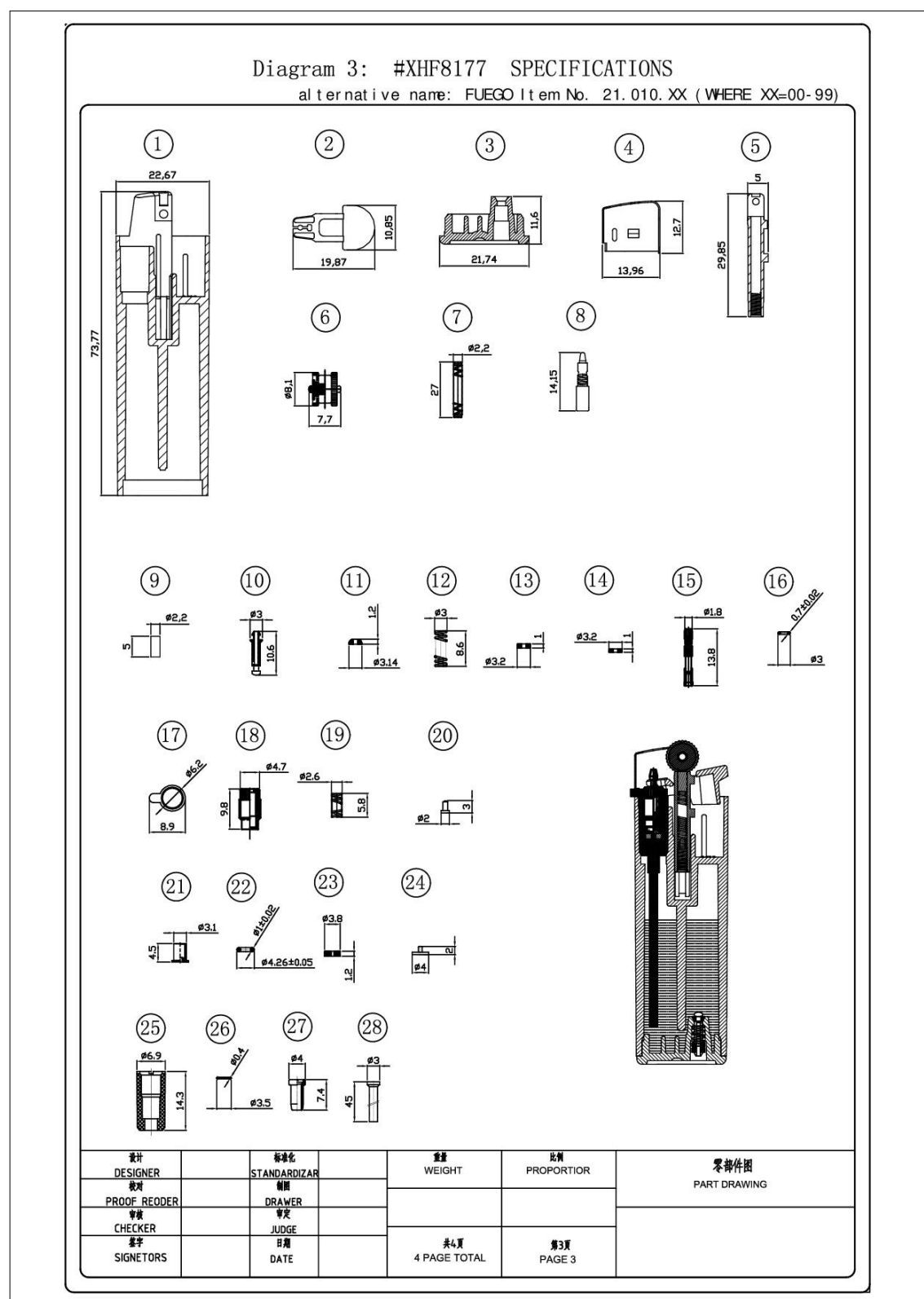


Diagram 4: #XHF8177 SPECIFICATIONS

alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)

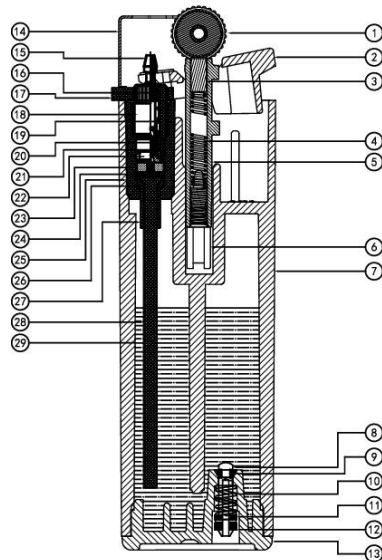
NO	名称 (NAME)	材料	重量 (WEIGHT) /g	规格 (SPECS) /mm
01	油箱 (Tank)	AS	7.738±0.002	22.67*10.87*73.77
02	撬板 (Gas Lever)	POM	0.502±0.002	10.85*19.87*9.2
03	底盖 (Bottom)	AS	0.873±0.002	21.74*9.94*11.6
04	风罩 (Wind Guard)	SPCC	1.012±0.002	13.96*10.87*12.7
05	支架 (Middle Case)	POM	0.348±0.002	8.52*5*29.85
06	钢轮组合 (Spark Wheel Unit)	Fe	1.258±0.002	Ø8.1*7.7
07	火石弹簧 (Flint Spring)	SWCH	0.099±0.002	Ø2.2*27
08	支架胶塞 (Stopper)	POM	0.102±0.002	Ø3.4*14.15
09	火石 (Flint)	Ce-ALLOY	0.116±0.002	Ø2.2*5
10	进气针 (Inlet Stem)	Zn-ALLOY	0.17±0.001	Ø3*10.6
11	碗垫 (Inlet Valve Packing)	NBR	0.005±0.001	Ø3.14*1.2
12	进气弹簧 (Inlet Valve Spring)	SWCH	0.056±0.002	Ø3*8.6
13	平垫 (Flat Gasket)	NBR	0.005±0.001	Ø3.2*1
14	平垫 (Flat Gasket)	NBR	0.005±0.001	Ø3.2*1
15	出气针 (Nozzle)	Zn-ALLOY	0.228±0.002	Ø1.8*13.8
16	小"O"环 (Nozzle O-Ring)	NBR	0.002±0.001	Ø3*0.7
17	调火环 (Adjuster Ring)	POM	0.04±0.002	8.9*6.2*1.8
18	螺帽 (Nozzle Housing)	POM	0.1±0.002	Ø4.7*9.8
19	出气弹簧 (Nozzle Spring)	SWCH	0.048±0.002	Ø2.6*5.8
20	T钉 (T-Packing)	NBR	0.004±0.001	Ø2*3
21	铝座 (Nozzle Bottom)	Al-ALLOY	0.055±0.002	Ø3.1*4.5
22	大"O"环 (Bottom O-Ring)	NBR	0.008±0.001	Ø4.26*1
23	海绵 (Filter)	PU	0.005±0.001	Ø3.8*1.2
24	铝钉 (T-nail)	Al-ALLOY	0.02±0.002	Ø4*2
25	套体 (Housing Holder)	AS	0.32±0.002	Ø6.9*14.3
26	锌套"O"环 (Wick Holder O-Ring)	NBR	0.001±0.001	Ø3.5*0.4
27	锌套 (Wick Holder)	Al-ALLOY	0.138±0.002	Ø4*7.4
28	吸杆 (Wick)	HDPE	0.04±0.002	Ø3*45

设计 DESIGNER		标准化 STANDARDIZAR		重量 WEIGHT	比例 PROPORTION	零部件明细表 PART LIST
校对 PROOF READER		制图 DRAWER				
审核 CHECKER		审定 JUDGE				
签字 SIGNATORS		日期 DATE		共4页 4 PAGE TOTAL	第4页 PAGE 4	

Diagram 1: #XHF8178 CUT VIEW
alter native name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)

构成图 (CUT VIEW)

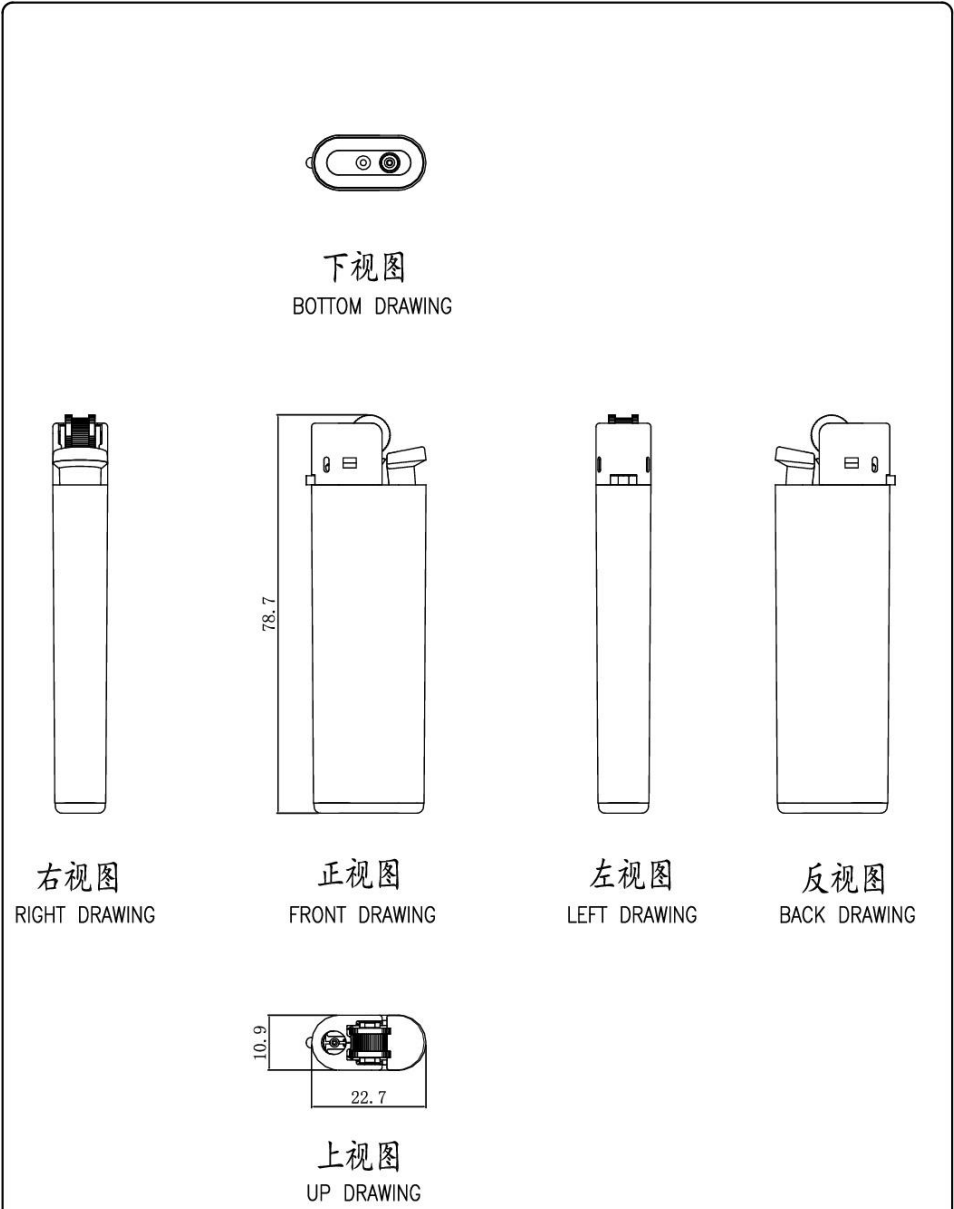
型号 (MODEL NO): XHF8178



29	丁烷气 (Gas)	LPG
28	吸杆 (Wick)	HDPE
27	持套 (Wick Holder)	Al-ALLOY
26	持套"O"环 (Wick Holder O-Ring)	NBR
25	套体 (Housing Holder)	AS
24	磁钉 (T-nail)	Al-ALLOY
23	滤网 (Filter)	PU
22	大"O"环 (Bottom O-Ring)	NBR
21	喷嘴 (Nozzle Bottom)	Al-ALLOY
20	T环 (T-Packing)	NBR
19	出气弹簧 (Nozzle Spring)	SWCH
18	喷嘴 (Nozzle Housing)	POM
17	调火环 (Adjuster Ring)	POM
16	小"O"环 (Nozzle O-Ring)	NBR
15	出气针 (Nozzle)	Zn-ALLOY
14	风罩 (Wind Guard)	SPOC
13	底座 (Bottom)	AS
12	平垫 (Flat Gasket)	NBR
11	平垫 (Flat Gasket)	NBR
10	进气弹簧 (Inlet Valve Spring)	SWCH
9	密封 (Inlet Valve Packing)	NBR
8	进气针 (Inlet Stem)	Zn-ALLOY
7	油箱 (Tank)	AS
6	支架胶塞 (Stopper)	POM
5	支架 (Middle Case)	POM
4	火石弹簧 (Flint Spring)	SWCH
3	火石 (Flint)	Ce-ALLOY
2	撬板 (Gas Lever)	POM
1	钢轮组合 (Spark Wheel Unit)	Fe
NO	部品名	材料

设计 DESIGNER	标准化 STANDARDIZAR	重量 WEIGHT	比例 PROPORTIOR
校对 PROOF READER	制图 DRAWER		
审核 CHECKER	审定 JUDGE	共4页 4 PAGE TOTAL	第1页 PAGE 1
签字 SIGNATORS	日期 DATE		

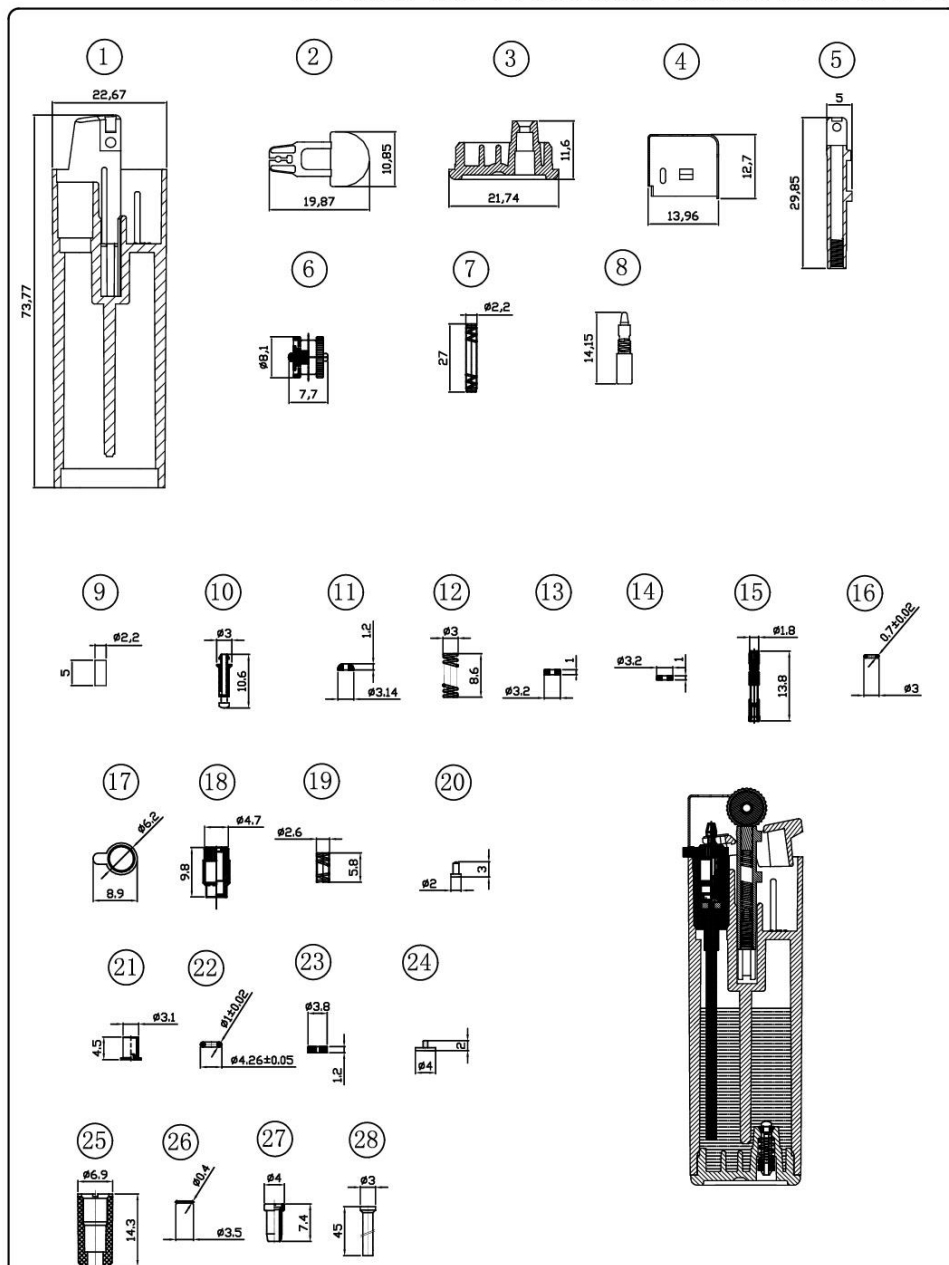
Diagram 2: #XHF8178 CHILD RESISTANCE LIGHTER
alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)



设计 DESIGNER		标准化 STANDARDIZAR		重量 WEIGHT	比例 PROPORTIOR	
校对 PROOF REODER		制图 DRAWER				
审核 CHECKER		审定 JUDGE				
签字 SIGNETORS		日期 DATE		共4页 4 PAGE TOTAL	第2页 PAGE 2	

Diagram 3: #XHF8178 SPECIFICATIONS

alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)



设计 DESIGNER	标准化 STANDARDIZAR	重量 WEIGHT	比例 PROPORTION	零部件图 PART DRAWING
校对 PROOF READER	制图 DRAWER			
审核 CHECKER	审定 JUDGE	共4页 4 PAGE TOTAL	第3页 PAGE 3	
签字 SIGNATORS	日期 DATE			

Diagram 4: #XHF8178 SPECIFICATIONS

alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)

NO	名称 (NAME)	材料	重量 (WEIGHT) /g	规格 (SPECS) /mm
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设计 DESIGNER		标准化 STANDARDIZAR		重量 WEIGHT	比例 PROPORTION	零部件明细表 PART LIST
校对 PROOF READER		制图 DRAWER				
审核 CHECKER		审定 JUDGE				
签字 SIGNATORS		日期 DATE		共4页 4 PAGE TOTAL	第4页 PAGE 4	

2.5.2 Pictures



ivm Report No. 23873960224 - 13869
Publik d.o.o., Valjevo, Serbia
Flint Gas Lighter XHF-8177 / XHF-8178
alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)



2.6 Test Procedure

2.6.1 Type of Test

The test was carried out in accordance with **EN 13869** and comprised of: Two tests with children (one before and one after demonstration).

2.6.2 Test Instruction as defined in EN 13869

Test with Children:

1. To begin the test, the tester shall say: *"I have a special lighter that will not make a flame. It makes a noise like this"*.

Except where doing so would block the child's view of a visual signal, the tester shall place a A4 format (21.0 x 29.7 cm) sheet of cardboard or other rigid opaque material upright on the table in front of the surrogate lighter, so that the surrogate lighter cannot be seen by the child, and shall operate the surrogate lighter once to produce its signal.

The tester shall say: *"your parents (or other guardian, if applicable) said it is okay for you to try to make that noise with your lighter"*. The tester shall place a surrogate lighter in each child's hand and say: *"now you try to make a noise with your lighter. Keep trying until I tell you to stop"*.

2. The tester shall observe the children for 5 min to determine if either or both of the children can successfully operate the surrogate lighter by producing one signal of any duration. If a child achieves a spark without defeating the child-resistant feature, say: *"that is a spark; it will not hurt you; try to make the noise with your lighter"*. If any child successfully operates the surrogate lighter during this period, the surrogate lighter shall be taken from that child and the child shall not be asked to try to operate the lighter again. The tester shall ask the successful child to remain until the other child is finished.
3. If either or both of the children are unable to successfully operate the surrogate lighter during the 5 min period specified in 2., the tester shall demonstrate the operation of the surrogate lighter.

To conduct the demonstration, secure the children's full attention by saying: *"okay, give me your lighters now"*.

Take the lighters and place them on the table in front of you out of the children's reach.

Then say: *"I will show you how to make the noise with your lighters. First I will show you with (child's name)'s lighter and then I will show you with (child's name)'s lighter"*.

Pick up the first child's lighter. Hold the lighter approximately 60 cm front of the children at their eye level, Hold the lighter in a vertical position in one hand with the child-resistant feature exposed (not covered by fingers, thumb, etc...). Orient the child-resistant mechanism on the lighter toward the children.

NOTE This can require a change in your orientation to the children such as sitting sideways in the chair to allow a normal hand position for holding the lighter while assuring that both children have a clear view of the mechanism. You can also need to reposition your chair so your hand is centred between the children.

Say: "*now watch the lighter*". Look at each child to verify that they are looking at the lighter. Operate the lighter one time in a normal manner according to the manufacturer's instructions. Do not exaggerate operating movements. Do not verbally describe the lighter's operation.

Place the first child's lighter back on the table in front of you and pick up the second child's lighter. Say: "*okay, now watch this lighter*". Repeat the demonstration as described above using the second child's lighter.

Testers shall be trained to conduct the demonstration in a uniform manner, including the words spoken to the children, the way the lighter is held and operated, and how the tester's hand and body is oriented to the children.

All testers shall be able to operate the surrogate lighters using only appropriate operating movements in accordance with the manufacturer's instructions.

If any of these requirements are not met during the demonstration for any pair of children, the results for that pair of children shall be eliminated from the test. Another pair of eligible children shall be used to complete the test panel.

4. Each child who fails to successfully operate the surrogate lighter in the first 5 min is then given another 5 min in which to attempt the successful operation of the surrogate lighter.

After the demonstrations give their original lighters back to the children by placing a lighter in each child's hand. Say: "*okay, now you try to make the noise with your lighters. Keep trying until I tell you to stop*".

If any child successfully operates the surrogate during this period, the surrogate lighter shall be taken from that child and the child shall not be asked to try to operate the lighter again. The tester shall ask the successful child to remain until the other child is finished.

5. At the end of the second 5 min test period, take the surrogate lighter from any child who has not successfully operated it.
6. After the test is over, ask the children to stand next to you. Look at the children's faces and say: "these are special lighters that do not make fire. Real lighters can burn you. Will you both promise me that you will never try to work a real lighter? Wait for an affirmative response from each child; then thank the children for helping.

7. Escort the children out of the room used for testing.
8. After a child has participated in the testing of a surrogate lighter and on the same day, provide written notice of the fact to the child's parent or guardian. This notification can be in the form of a letter provided to the school to be given to the parents or guardian of each child. The notification shall state that the child participated, shall ask the parent or guardian to warn the child not to play with lighters and shall remind the parent or guardian to keep all lighters and matches, whether child resistant or not, out of the reach of children.
9. For children who operated the surrogate lighter, the notification shall state that the child was able to operate the child-resistant lighter. For children who do not defeat the child-resistant feature, the notification shall state that, although the child did not defeat the child-resistant feature, the child may be able to do so in the future.

2.7 Surrogate Lighter

According to the provisions of child resistant lighters, surrogate lighters have to be used during the test, fulfilling the following requirements:

The surrogate lighter is a device that

- approximates to the appearance, size, shape and weight of, and is identical in all other factors that affect child-resistance (including operation and the force(s) required for operation), within reasonable manufacturing tolerances, to a lighter intended for use by consumers;
- has no fuel;
- does not produce a flame; and
- produces an audible or visual signal that will be clearly discernible when the surrogate lighter is activated in a manner that would normally produce a flame in a production lighter.

This does not require a lighter to be modified with electronics or the like to produce a signal. Producers can use as a surrogate lighter a production lighter but without fuel, if a distinct signal such as a "click" can be heard clearly when the mechanism is operated in each manner that would produce a flame in a production lighter.

The surrogate lighter used in this test fulfilled all these requirements.

3 Safety Requirements

3.1 Safety Requirements as defined in EN 13869

EN 13869 lists the following safety requirements for lighters:

- Lighters shall comply with EN ISO 9994.
- No lighter shall be a novelty lighter.
- Lighters shall be resistant to successful operation by at least 85 % of the child test panel when tested.
- The mechanism or system of a lighter that makes the product resist successful operation by children shall:
 - reset itself automatically after each operation of the ignition mechanism of the lighter;
 - not impair safe operation of the lighter when used in a normal and convenient manner;
 - be effective for the reasonably expected life of the lighter; and
 - not be easily overridden or deactivated.

The manufacturer of the lighter guarantees that all these requirements are fulfilled or will be fulfilled by the time the product will be available on the market. Should any of these requirements not be fulfilled by that time, this certification will also cease to be valid.

4 Test Report

4.1 Test with Children

4.1.1 Test Requirements as defined in EN 13869

The tests were carried out with 60 children aged 42 up to and including 51 months. According to EN 13869 30 % of the children were aged 42–44, 40 % were aged 45–48 and 30 % 49–51 months. The surrogate lighters were used. The testers checked each lighter for proper functioning.

The following was documented in the test records:

- Test locations, date and tester,
- Number, name (first name only for data protection reason), age in months and gender of the participating children,
- Number, of the children who succeeded in operating the lighter before and after demonstration (successful or unsuccessful operation attempts) and, if applicable, method and duration,
- Evaluation of test results in per cent (successful / unsuccessful operation)
- Elapsed time at which a child achieved a successful operation.

4.1.2 Test Preparations and Test Procedure

The child tests were conducted in Braunschweig and its surroundings. The locations and social facilities chosen for the tests had been suitably prepared in advance and provided with detailed information.

The Head of test laboratory certified the test procedure, the number of children that took part in the tests as well as the total testing time. This certification serves as proof of the correctness of the test. In addition, each tester was audited and the results recorded by the testers were checked for plausibility. Customer approved Informed Consent Forms for parental adults were used and retained.

The original records are kept at **ivm** and may be inspected by authorized persons upon request.

The children were chosen with regard to having a test group that is as representative as possible. To meet this requirement, the tests were made in various locations in the city of Braunschweig and its rural vicinity. The social facilities that took part in the tests were run either by the church or independent institutions.

It was checked prior to the tests that the children were healthy, judging by appearances, and that their manual skills were not impaired. When selecting the children, the testers also made sure that no participant had taken part in more than one test in the course of the last 12 months.

The tests were made in surroundings that were familiar to the children. The children were tested in pairs, and care was taken to ensure that the children would not disturb each other. They were repeatedly requested to keep trying hard to operate the lighter. Tips on how to operate the lighter were not given. Where adults were in the room together with the children, the testers made sure that they did not influence the children in any manner. Their presence was documented in the records.

The children were given five minutes to try to operate the lighter. They were allowed to use any method they could think of. Tools or other aids were not made available. If a child succeeded in operating the lighter, he or she remained in the room until the end of test.

After five minutes, the children that were unsuccessful in operating the lighter were given a practical demonstration of the procedure, but received no verbal explanation. Again, the children had five minutes to try to operate the lighter.

4.1.3 Results of Tests with Children

The results of the tested lighter **Flint Gas Lighter XHF-8177 / XHF-8178 / alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)** were entered in the test sheets.

Results:

1 (one) successful operation was registered in the first 5-minutes test (before demonstration). In the full 10-minutes test, 2 (two) successful operations were registered. This corresponds to a percentage of 1.7 % before demonstration and a total percentage of 3.3 %.

The results are within the tolerance range of the EN 13869 (2016).

Child Test Conclusion: The lighter does comply with the child test requirements of Standard EN 13869 (2016).

ivm	Institut VerpackungsMarktforschung								
	Friedrich Seele Str. 20, 38122 Braunschweig								
Childtest									
ivm No.:	23873960224				Object:	Flint Gas Lighter XHF-8177 / XHF-8178 alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)			
Location				Date	No.	Tester		Remarks	
Kita St. Raphael, Wolfsburg				15.09.2023	1-18	Bettina Heming			
Kitab Lilliputt, Goslar				18.09.2023	19-36	Britta Schebesta			
Kita Schefflerstraße, Braunschweig				18.09.2023	37-38	Bettina Heming			
Kita Kunterbunt, Goslar				22.09.2023	39-40	Britta Schebesta			
Zackmünder Knirpse, Magdeburg				22.09.2023	41-51	Mandy Schlopath			
Am Salbker See, Magdeburg				26.09.2023	52-60	Mandy Schlopath			
A					Test before Demonstration		Test after Demonstration		
No.	Name	Age/Months	female	male	not operated	operated	not operated	operated	Remarks
1	Matteo	42	0	1	1	0	1	0	
2	Emilia	51	1	0	1	0	1	0	
3	Julius	48	0	1	1	0	1	0	
4	Liyah	51	1	0	1	0	1	0	
5	Bonni	46	1	0	1	0	1	0	
6	Orbi	45	1	0	1	0	1	0	
7	Bennet	44	0	1	1	0	1	0	
8	Gabriel	45	0	1	1	0	1	0	
9	Ophelia	42	1	0	1	0	1	0	
10	Liam	45	0	1	1	0	1	0	
11	Lion	51	0	1	1	0	0	1	
12	Marlon	50	0	1	1	0	1	0	
13	Alessandro	48	0	1	1	0	1	0	
14	Noah	44	0	1	1	0	1	0	
15	Sloan	44	1	0	1	0	1	0	
16	Alessio	46	0	1	1	0	1	0	
17	Kjell	51	0	1	1	0	1	0	
18	Maximilian	51	0	1	1	0	1	0	
19	Pia	44	1	0	1	0	1	0	
20	Dian	44	0	1	1	0	1	0	
21	Can	44	0	1	1	0	1	0	
22	Asfia	44	0	1	1	0	1	0	
23	De-Jay	45	1	0	1	0	1	0	
24	Inaya	48	1	0	1	0	1	0	
25	Clea	46	1	0	1	0	1	0	
26	Ben Makosa	48	0	1	1	0	1	0	
27	Maxi	47	0	1	1	0	1	0	
28	Ammier	47	0	1	1	0	1	0	
29	Jaafer	48	0	1	1	0	1	0	
30	Mayan	48	0	1	1	0	1	0	
31	Pella	49	1	0	1	0	1	0	
32	Nisa	51	1	0	1	0	1	0	
33	Ebyen	51	0	1	1	0	1	0	
34	Alexander	51	0	1	1	0	1	0	
35	Marlon	51	0	1	0	1	-	-	
36	Mudasa	51	0	1	1	0	1	0	
37	Edwin	46	0	1	1	0	1	0	
38	Aras	43	0	1	1	0	1	0	
39	Ellissar	42	1	0	1	0	1	0	
40	Muhamed-Gan	42	0	1	1	0	1	0	
41	Maria	43	1	0	1	0	1	0	
42	Emma	42	1	0	1	0	1	0	
43	Milana	48	1	0	1	0	1	0	
44	Amelia	45	1	0	1	0	1	0	
45	Caja	47	1	0	1	0	1	0	
46	Vincent	46	0	1	1	0	1	0	
47	Leon	48	0	1	1	0	1	0	
48	Mathilda	49	1	0	1	0	1	0	
49	Lena	50	1	0	1	0	1	0	
50	Adrian	46	0	1	1	0	1	0	
51	Elias	49	0	1	1	0	1	0	
52	Max	44	0	1	1	0	1	0	
53	Aris	49	0	1	1	0	1	0	
54	Levin	47	0	1	1	0	1	0	
55	Julien	50	0	1	1	0	1	0	
56	Timofei	44	0	1	1	0	1	0	
57	Robin	44	0	1	1	0	1	0	
58	Titus	48	0	1	1	0	1	0	
59	Edgar	42	0	1	1	0	1	0	
60	Alessio	51	0	1	1	0	1	0	
Σ / Ø	-	46.8	20	40	59	1	58	1	

Object: Flint Gas Lighter XHF-8177 / XHF-8178 alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)						
1. Operations						
A	female			male		
age in months	number of children	operations 5-minutes-test	operations 10-minutes-test	number of children	operations 5-minutes-test	operations 10-minutes-test
42 - 44	6 10.0 %	0 0.0 %	0 0.0 %	12 20.0 %	0 0.0 %	0 0.0 %
45 - 48	8 13.3 %	0 0.0 %	0 0.0 %	16 26.7 %	0 0.0 %	0 0.0 %
49 - 51	6 10.0 %	0 0.0 %	0 0.0 %	12 20.0 %	1 1.7 %	2 3.3 %
Σ	20 33.3 %	0 0.0 %	0 0.0 %	40 66.7 %	1 1.7 %	2 3.3 %
2. Mean operating times and standard deviation						
5-minutes-test - Average: 123 s; Standard deviation: N/A						
10-minutes-test - Average: 229.5 s; Standard deviation: 150.6 s						
3. Percentage of lighters tested at each location						
Kita St. Raphael, Wolfsburg: 30.0%						
Kitab Lilliputt, Goslar: 30.0%						
Kita Schefflerstraße, Braunschweig: 3.3%						
Kita Kunterbunt, Goslar: 3.3%						
Zackmünder Knirpse, Magdeburg: 18.3%						
Am Salbker See, Magdeburg: 15.0%						
4. Percentage of lighters tested by each tester						
Bettina Heming: 33.3%						
Britta Schebesta: 33.3%						
Mandy Schlopath: 33.3%						
5. Child-Resistant Effectiveness						
5-minutes-test: 98.3%						
10-minutes-test: 96.7%						

Results of tests with children

4.2 Overall Test Result

ivm Test Report No.: **23873960224 – 13869**

Tested lighter: Flint Gas Lighter XHF-8177 / XHF-8178 / alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)

The result of CR testing is that the provided lighter meets the requirement of EN 13869 (2016).

The lighter Flint Gas Lighter XHF-8177 / XHF-8178 / alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99) can be denoted as child-resistant.

The evaluation of the lighters proves that all requirements of the standard for child-resistant packaging are fulfilled.

These results only apply to the tested lighters provided as samples and mentioned above.

5 Confirmation of Conformity

This confirms that the tested lighter Flint Gas Lighter XHF-8177 / XHF-8178 / alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99) meets the requirements of the standard EN 13869 (2016) for child-resistant lighters.

Braunschweig, 03.04.2024



Signed: Stephanie Georg, Head of test laboratory

6 Creation Notes

process	done by	date
Preparation of the report	Stephanie Georg	08.03.2024
Confirmation of conformity	Stephanie Georg	08.03.2024
Review & approval	Stephanie Gebhardt	03.04.2024

7 Declaration of compliance

According to EN 13869, a declaration of compliance (e.g.: certificate) shall accompany each shipping unit of the product (for example, a case), or otherwise be furnished to any distributor or retailer to whom the product is sold or delivered by the producer.

The declaration shall state:

- a) that the product complies with the European Standard EN 13869;
- b) the name and address of the producer;
- c) the period(s) of time, not to exceed 31 days, during which the lighters were manufactured; and
- d) the address of the place of manufacture, if different from the address in b).

8 Product marking

The standard also states that the producer shall label each lighter with the following information, which may be in code:

- a) an identification of the period of time, not to exceed 31 days, during which the lighter was manufactured; and
- b) an identification of the producer of the lighter, unless the lighter bears a private label. If the lighter bears a private label, it shall bear a code mark or other label which will permit the seller of the lighter to identify the manufacturer upon request.

9 Brief Test Report

1. Test Institute

ivm Institut Verpackungsmarktforschung GmbH
Friedrich-Seele-Straße 20
38122 Braunschweig, Germany

2. Manufacturers/Suppliers of the Tested Lighter

Publik d.o.o., Valjevo, Serbia

3. Tested Lighter

Flint Gas Lighter XHF-8177 / XHF-8178

alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99)

4. Test Period

The tests were performed in September 2023.

5. Test Standard

Testing of lighters according to EN 13869 (2016) for child-resistance.

6. Test Persons

60 children aged 42–51 months

7. Results of Test with Children

5-minutes test: 1 successful operation, 10-minutes test: 2 successful operations

8. Confirmation of Conformity

This confirms that the tested lighter Flint Gas Lighter XHF-8177 / XHF-8178 / alternative name: FUEGO Item No. 21.010.XX (WHERE XX=00-99) meets the requirements of the standard EN 13869 (2016) on child-resistant lighters.

ivm Test Report No.: 23873960224 – 13869

This confirmation only applies to the tested lighters provided as samples and mentioned above. This confirmation on conformity is valid as long as no modifications are made to the lighter (e.g. its data specifications of dimensions, material, weight and the child-resistant feature).

Braunschweig, 03.04.2024

ivm Institut Verpackungsmarktforschung GmbH



Stephanie Georg
Head of test laboratory



End of test report No. 23873960224 – 13869.