



CERTIFICATE of Conformity

Reference No.: LCS2107300821S

Applicant : QuZhou AnBen FireFighting Equipment CO.,LTD.

Address : Room 420,Building 2,ZheXi Avenue,No30,QuZhou City
ZheJiang Province, China.

Product : Fire Escape Mask

Model(s) : XHZLC 30, XHZLC 40, XHZLC 50, XHZLC 60, XHZLC 90, TZL30

Trade Mark : AnBen

Parameters : N/A

The submitted products have been tested by us with the listed standards and found in compliance with the following European Directives:

**the council Personal Protective Equipment Directive 2016/425/EC 89/686/EEC
EN 403: 2004**

Respiratory protective devices for self-rescue - Filtering devices with hood for escape from fire - Requirements, testing, marking

It is possible to use CE marking to demonstrate the conformity with this PPE Directive.

The test report was carried out from the submitted type-samples of a product in conformity with the specification of the respective standards. The certificate holder has the right to fix the CE-mark for PPE directive on the product complying with the inspection samples.



Manager

July 29, 2021

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APPLICATION REPORT

On Behalf of

QuZhou AnBen Fire Fighting Equipment Co., Ltd

Fire Escape Mask

Model: XHZLC 30, XHZLC 40, XHZLC 50, XHZLC 60, XHZLC 90, TZL30

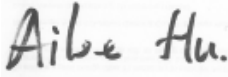
**Prepared For : QuZhou AnBen Fire Fighting Equipment Co., Ltd
ROOM420 Buildings 2,ZheXi Avenue NO30,QuZhou City
Zhejiang Province, China**

**Prepared By : Shenzhen LCS Compliance Testing Laboratory Ltd.
1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an
District, Shenzhen, Guangdong, China**

Date of Test : July 20, 2021 — July 30, 2021

Date of Report : July 30, 2021

Report Number : LCS2107300821S

TEST REPORT EN 403: 2004 Specification for industrial safety helmets	
Report	
Reference No. :	LCS2107300821S
Tested by (+ signature)..... :	Ailee Hu 
Approved by (+ signature)..... :	Hart Qiu 
Date of issue	July 30, 2021
Contents	16 pages
Testing laboratory	
Name	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	1/F; Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
Testing location	Same as above
Client	
Name	QuZhou AnBen FireFighting Equipment Co., Ltd
Address	ROOM420, Building 2, ZheXi Avenue, NO30, QuZhou City, Zhejiang Province, China
Test specification	
Standard	EN 403: 2004
Test procedure	Compliance with EN 403: 2004
Procedure deviation	N.A.
Non-standard test method	N.A.
Test item	
Description	Fire Escape Mask
Trademark	AnBen
Model and/or type reference.....	XHZLC 30, XHZLC 40, XHZLC 50, XHZLC 60, XHZLC 90, TZL30
Manufacturer	QuZhou AnBen FireFighting Equipment Co., Ltd
Address	ROOM420, Building 2, ZheXi Avenue, NO30, QuZhou City, Zhejiang Province, China
Rating(s).....	--

Test case verdicts

Test case does not apply to the test object..... : N(.A.)

Test item does meet the requirement : P(ass)

Test item does not meet the requirement : F(ail)

Testing

Date of receipt of test item : July 20, 2021

Date(s) of performance of test..... : July 20, 2021 to July 30, 2021

General remarks

“This report is not valid as a CB Test Report unless appended to a CB Test Certificate issued by a NCB, in accordance with IEC 60385-2”.

This test report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item tested.

“(see remark #)” refers to a remark appended to the report.

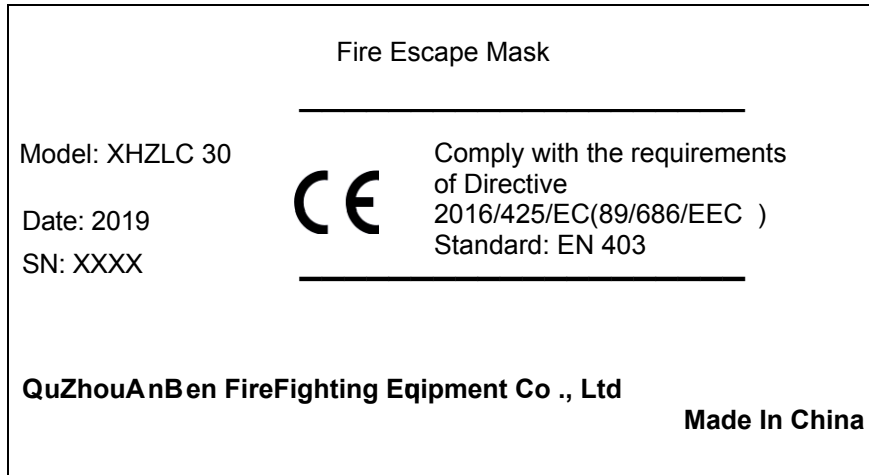
“(see appended table)” refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

Remark:

All models are similar except their appearance and model designation. All tests were evaluated on model XHZLC 30.

Copy of marking plate



Summary of testing:

Rubbing for 15 s with a piece of cloth soaked with water. And a further 15 s with a piece of cloth soaked with petroleum spirit

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
7	Testing		--
7.1	General		--
	If no special measuring devices or measuring methods are specified, commonly used methods and devices should be applied.	Be applied	P
	Before performing tests involving human subjects, account should be taken of any national regulations concerning the medical history, examination or supervision of the test subjects.	No such functions	N
7.2	Nominal values and tolerances		--
	Unless otherwise specified, the values stated in this standard are expressed as nominal values. Except for temperature limits, values which are not stated as maxima or minima shall be subject to a tolerance of 5 %. Unless otherwise specified, the ambient temperature for testing shall be from 16 C to 32 C, but for the mechanical tests from 10 C to 30 C, and the temperature limits shall be subject to an accuracy of 1 C.	25°C	P
7.3	Visual inspection		--
	A visual inspection of the filtering devices shall be carried out and the appropriate results reported. The visual inspection includes marking and information supplied by the manufacturer.	See the making	P
7.4	Conditioning		--
7.4.1	General		--
	The conditioning procedures specified in 7.4.2 to 7.4.6 shall be applied sequentially to all test specimens.		P
	The device shall be conditioned in the smallest packaging in which it is stored or carried.		P
7.4.2	Mechanical strength		--
	The device shall be tested in its packaging in accordance with 8.3 of EN 141:2000 using 2 000 rotations for 'S' type and 10 000 rotations for 'M' type.		N
7.4.3	Impact		--

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	The device shall be dropped in its packaging six times from a height of 1,5 m onto a smooth concrete surface using different starting orientations.	6 times, 1.5m	P
	This conditioning applies only to devices of 'M' type.		N
7.4.4	Resistance of packaging to puncture and tear		--
7.4.4.1	Principle		--
	A striker is allowed to fall with a specified energy, point downwards onto the device packaged as described in 7.4.1. The packaging is then pulled out from under the point and inspected for punctures or tears.		P
7.4.4.2	Apparatus		---
	Typical test equipment is shown in Figure 1. It consists mainly of		P
	a) striker;		P
	b) mounting arm for the striker: suitably pivoted;		P
	c) smooth polished steel base plate;		P
	d) spring balance.		P
7.4.4.3	Procedure		--
	It shall be ensured that the effective force at rest of the mounting arm and the striker is $1N \pm 2\%$. The necessary adjustment shall be made using a spring balance attached to the striker.		P
	The test specimen in its packaging is placed under the striker such that when released the striker hits the packaging.		P
	The impact of the striker shall be from a height of 100 mm.		P
	Leaving the striker in contact with the packaging, briskly pull the packaging away in the direction shown in Figure 1.		P
	Examine the packaging for any puncture or tear.	No deformation	P
	Repeat the procedure twice more to hit different areas of the packaging.	No deformation	P
7.4.5	Temperature		--
	The device shall be in the packaging as described in 7.4.1.		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	Testing shall be done in accordance with the following clauses of EN 13274-5:2001:		P
	a) 6.2.2, 6.3.4 and 6.4.1;		P
	b) 6.2.2, 6.3.2 and 6.4.1;		P
	c) 6.2.8 and 6.4.2.		P
7.4.6	Pressure changes		--
	Only devices classified as 'M' shall be exposed in its packaging as described in 7.4.1 consecutively to the following pressure changes:		P
	a) 2 pressure change cycles in a test chamber for negative pressure from ambient pressure to a differential pressure of (-400 ± 10) mbar.	-400 mbar	P
	The final pressure shall be achieved in less than 20 s. After 60 s the pressure compensation shall be started by venting the test chamber. The pressure compensation shall be achieved in less than 20 s.	less than 20 s	P
	b) 3 000 pressure change cycles in a test chamber for negative pressure from ambient pressure to a differential pressure of (-300 ± 10) mbar.		P
	The final pressure shall be achieved in less than 10 s. After 60 s the pressure compensation shall be started and shall be achieved in less than 10 s.	10s	P
	If there is more than one test specimen in the test chamber to be exposed to the pressure changes then the test specimens shall not be in contact with each other.	No changes	P
7.5	Practical performance test		--
7.5.1	General		--
	For practical performance tests, only devices of the type which passed the laboratory testing shall be worn.		P
	A total of 5 filtering smoke hoods shall be tested.		P
	Prior to the test the filtering smoke hoods shall be examined to ensure that they are in good working condition and can be used without hazard.		P
	For test subjects shall be selected who are familiar with using such or similar devices.		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	Five test subjects shall be used for the practical performance tests. They shall be made familiar with the device using the instructions for use.		P
	The test subjects shall complete the exercises listed in 7.5.2 in a normally lit room at ambient atmosphere and the test temperature and the humidity shall be recorded.		P
	During the tests the device shall be subjectively assessed by the wearer and after the test, comments on the following shall be recorded:		P
	a) harness comfort (if fitted);		P
	b) security of fastenings and couplings;		P
	c) accessibility of controls (if fitted);		P
	d) clarity of vision on the visor of the face piece;		P
	e) the visibility of a sign consisting of letters 100 mm in height at a distance of 6 m;		P
	f) communication with a test supervisor;		P
	g) any other comments reported by the wearer on request.		P
7.5.2	Exercises		--
	a) walking on the level with headroom of $(1,3 \pm 0,2)$ m for 5 min;		P
	b) crawling on the level with headroom of $(0,7 \pm 0,05)$ m for 5 min;		P
	c) filling a small basket (Figure 2, approx. volume = 8 l) with "rubber chippings" or other suitable material from a hopper which stands 1,5 m high and has an opening at the bottom to allow the contents to be shovelled out and a further opening at the top where the basket full of rubber chippings shall be returned.		P
	The subject shall stoop or kneel as he wishes and fill the basket with rubber chippings. He shall then lift the basket and empty the contents back into the hopper. This shall be repeated 15 times in 5 min.		P
7.6	Leakage		--
7.6.1	Inward leakage excluding filter penetration (breathing zone)		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	Test subjects, number of test specimen and preparation of test specimen in accordance with EN 405.		P
	Testing in accordance with EN 13274-1, test method 1 using sulfur hexafluoride as test agent.		P
7.6.2	Leakage into ocular zone		--
7.6.2.1	Number of test specimens and test subjects		P
	For the test 10 test specimen and 10 test subjects shall be used.		P
7.6.2.2	Preparation of test specimen		--
	The visor in the hood shall be prepared by perforating such that a sampling probe and a thin air supply hose can be inserted in a leak tight manner by appropriate plugs.		P
	The sampling probe shall be positioned inside the hood on one side of the test subject at eye level. The port for the air supply hose shall be positioned on the other side slightly displaced from eye level, so that the test subject will not be distressed by the pressure compensating air flow. In the middle between the ports for the sampling probe and the air supply a third hole shall be punched for connecting a sensitive differential pressure meter (sensitivity < 0,01 mbar).		P
7.6.2.3	Setting-up procedure		--
	The test subject wearing the hood prepared as described in 7.6.2.2 shall stand on a treadmill.		P
	A continuous sample flow rate of 0,5 l/min shall be fed through the sampling line to the flame photometer and shall be diluted with clean air, if necessary, to achieve the minimum flow rate required by the photometer.		P
	Clean air shall be fed through the air supply at a flow rate of 0,5 l/min into the hood. Adjustments to the air flow necessary to ensure that the pressure in the hood and ambient are the same shall be made while the test subject is standing without any movement.		P
7.6.2.4	Test procedure		--
	Testing shall be done in accordance with EN 12941 using sodium chloride as test agent.		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	At the end of the test the challenge concentration in the test chamber shall be measured using the same flow rates and diluting conditions as were employed for measuring the in-hood concentrations.		P
7.6.2.5	Expression of results		--
	The leakage into the ocular area LH shall be calculated from measurements made over the last 100 s of each of the exercise periods to avoid carry over of results from one exercise to the other.		P
7.7	Gas capacity		--
7.7.1	General		--
	The gas capacity shall be tested with 3 filters for each test gas for each test condition. When one filter of a multiple filter device is tested separately, the air flow specified for a test shall be divided by the number of filters through which the airflow is proportioned.		P
7.7.2	Carbon monoxide test		--
7.7.2.1	Apparatus		--
	Schematic diagrams of test arrangements that have been found suitable are given in Figures 3, 4, 5 and 6. They mainly consist of		P
	a) breathing machine equipped with solenoid valves controlled by the breathing machine;		P
	b) humidifier;		P
	c) flow meters for air and carbon monoxide;		P
	d) test chamber equipped with sampling ports and exhaust;		P
	e) carbon monoxide analysers;		P
	f) means of measurement of pressure, temperature and moisture content;		P
	g) 'Sheffield' dummy or suitable adapter;		P
	h) supply of carbon monoxide.		P
7.7.2.2	Procedure		--

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	The hood to be tested shall be mounted on the dummy head (Sheffield). The filter, if tested separately, shall be mounted on a suitable adapter. The test shall be carried out including the valves of the hood, if applicable.		P
	With a flow of not less than 100 l/min of air with carbon monoxide and water vapour content fed into the test chamber via control valves and flow meters the following conditions in the test chamber shall be established using the breathing machine set to 20 cycles/min and 1,5 l/stroke:		P
	The temperature and humidity of the test atmosphere and exhalation air shall be controlled by using suitable conditioners.		P
	The carbon monoxide and water vapour concentrations as well as the differential pressure in the test chamber 2,5 cm in front of the air inlet of the test specimen shall be monitored and recorded continuously during the test.		P
	The breathing resistance and the carbon monoxide concentration (ml/m ³) shall be measured and recorded continuously.		P
	When tested against 0,5 % by volume carbon monoxide in air as test atmosphere		P
	- the dry bulb temperature of the inhaled air shall be measured using a fast response thermocouple (for example NiCr-Ni 0,2 mm diameter);		P
	- the moisture content of the inhaled air shall be measured continuously. A suitable method is given in annex A.		P
7.7.2.3	Other concentrations		--
	The test shall be repeated but with the variation to use 0,5 %, 0,75 %, and 1,0 % by volume carbon monoxide in air until all four values have been used.		P
7.7.2.4	Breakthrough criteria		--
	The carbon monoxide concentration of the inhaled air shall not exceed 200 ml/m ³ time weighted average in any single 5 min period.	not exceed	N
7.7.3	Other test gases		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	The conditions shown in Table 1 shall be used for testing with the gases specified in 6.11.1.		P
	The filter under test shall be connected to a test rig generating a continuous air flow of 30 l/min ($\pm 3\%$) with the required concentration of test gas.	30 l/min	P
	The test atmosphere shall be at a temperature of $(20 \pm 1)^\circ\text{C}$ and shall have a relative humidity of $(70 \pm 5)\%$. When hydrogen chloride is used as a test gas the relative humidity shall be $(30 \pm 10)\%$.	20°C, 70%RH	P
	The breakthrough concentration shall be monitored with a maximum error of 20 %. The breakthrough time shall be stated in minutes.		P
7.8	Filter penetration		--
	Testing in accordance with 8.7.2 of EN 143:2000 using 3 filters and sodium chloride aerosol.		P
	When one filter of a multiple filter device is tested separately, the air flow specified for a test shall be divided by the number of filters through which the air flow is proportioned.		P
7.9	Breathing resistance		P
	Two filtering smoke hoods shall be tested.		P
	The ready-for-use device shall be mounted on a Sheffield dummy head. The breathing resistance shall be determined at the mouth of the dummy head using a breathing machine (adjusted to 1,5 l/stroke, 20 cycles/min) using the procedure given at 7.7.2.2. The flow rate at which the resistance is measured shall be corrected to 23 °C and 1 bar absolute.		P
7.10	Flammability		--
7.10.1	Test specimen		P
	Two filtering smoke hoods shall be tested.		P
7.10.2	Apparatus		P
	The test rig described in EN13274-4 method 1 is used.		P
7.10.3	Procedure		--

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
	The filtering smoke hood shall be fitted on the metallic dummy head. If the filtering smoke hood is not equipped with a head harness, the material of the filtering smoke hood shall be clamped in an appropriate clamping device such that the material is horizontal.		P
	The distance between the outer surface of the filtering smoke hood and the burner tips shall be adjusted to 250 mm.		P
	The pressure reducer shall be adjusted to approximately 0,15 bar. It shall be ensured that the control device for propane gas on the burners is fully opened and that the control device for air is fully closed. The temperature of the flame 250 mm above the burner tip shall be $(800 \pm 50) ^\circ\text{C}$.		P
	The filtering smoke hood (on the dummy head) or the filtering smoke hood material (in the clamp) shall be rotated once through the flame at a velocity of $(6 \pm 0,5) \text{ cm/s}$.		P
	Where components such as valve(s), filter(s) etc. are arranged on other parts of the filtering smoke hood, the test shall be repeated with these components at the appropriate height (250 mm) above the flame.		P
	After passing through the flame it shall be recorded whether or not the filtering smoke hood or other components continued to burn or presented any additional potential hazard to a wearer.		P
7.11	Carbon dioxide content of the inhalation air		--
	Two filtering smoke hood shall be tested.		P
	Testing shall be done in accordance with EN 136.		P
7.12	Connections		--
	Two filtering smoke hood shall be tested.		P
	Test time shall be 10 s. The filtering smoke hood shall be supported on a dummy head which shall be adjusted such that the load can be applied axially to the connection as shown in Figure 7.		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
8	Marking		--
8.1	General	See marking label	P
	All the markings shall be readable and durable.		P
	Sub-assemblies and piece parts with considerable bearing on safety shall be marked so that they can be identified.		P
	The clauses of this European Standard are likely to support requirements of Directive 89/686/EEC, Annex II:		P
8.2	Filtering smoke hood or package		--
	All filtering smoke hoods or at least the packaging shall be marked with		--
	a) the dated number of this European Standard and classification, if applicable;		P
	b) the manufacturer, supplier or importer shall be identified by name, trademark, or other means of identification;		P
	c) manufacturer's model designation.		P
8.3	Package		--
	The package shall be marked at least with the following information:	See product package	--
	a) class i.e. 'M' or 'S';		P
	b) date of manufacture (year and month) and the end of shelf life or date for next inspection. Equivalent pictograms can be used (Figure 8);		P
	c) manufacturer's recommended conditions of storage (at least the temperature and humidity) or equivalent pictogram as shown in Figure 8;		P
	d) the sentence "See information supplied by the manufacturer." at least in the official language(s) of the country of destination or the appropriate pictogram as shown in Figure 8;		P
	e) when the reliable performance of the device may be affected by mass increase, e. g. absorption of humidity, the mass shall be given on the packaging that protects against humidity;		P
	f) if the device is fitted with a mouthpiece and a nose clip the statement: 'Do not speak during use'.	No such devices	N

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict
9	Information supplied by the manufacturer		--
	On the delivery, the information supplied by the manufacturer	Be supplied by the manufacturer	P
	a) shall accompany every device;		P
	b) shall be at least in the official language(s) of the country of destination;		P
	c) shall contain all information necessary for trained and qualified persons on:		P
	application/limitations;		--
	- the information for single use only of short duration;		P
	- information of limitation with respect to wearer's size and facial characteristics, and a statement of suitability for use by children;		P
	- the prevention of speech when wearing a device incorporating a mouthpiece;		P
	controls prior to use;		--
	- donning and fitting;		P
	- use;		P
	- maintenance and inspection intervals;		P
	- storage;		P
	- shelf life, if applicable.		P
	d) special attention shall be drawn to:		P
	self-rescue;		--
	the fact that no protection against oxygen deficiency is provided.		P
	e) shall include warnings against problems likely to be encountered, for example:		P
	- the unit shall not be damaged in any way;		P
	- donning procedure shall be carried out in accordance with the instructions for use.		P
	f) shall be clear and comprehensible. If helpful illustrations should be added; e.g. showing the donning procedure;		P
	g) it shall be possible to have access to the information supplied by the manufacturer without breaking any seal;		P
	h) explanation of the used symbols shall be added.		P

EN 403: 2004			
Clause	Requirement Test	Result - Remark	Verdict

Annex A	Method for the determination of wet bulb temperature of the inhaled air		--
	A schematic arrangement of a suitable apparatus is shown in Figure A1.		P
	A continuous sample of air shall be drawn from the inhalation breathing path at a constant flow rate of 0,1l/min and passed through the sensor head block. All sample lines and the sensor head block shall be heated to at least 10 °C above the anticipated dew point temperature. The dew point temperature shall be recorded throughout the test. The dry bulb temperature shall be measured in accordance with 7.7.2.2.		P
	The wet bulb temperature then shall be determined using the following calculation.		P
	At the dew point temperature, the gas is fully saturated. Hence, the relative humidity (RH) is given by:		P
	Saturation vapour pressure at temperature t shall be obtained from the following equation:		P
	Since the dry bulb temperature has been measured, and the relative humidity determined from equations(A.1) and (A.2), then the wet bulb depression, and hence the wet bulb temperature can be obtained from standard psychrometric tables.		P

Pictures



Fig. 1 Main view



Fig. 2 Vertical view