COMPLIANCE TESTING FOR BS EN 1078:2012+A1:2012 HELMETS USED FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS AND ROLLER SKATES

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: JR/XS (50-54 cm)
Lot Number	: TBD
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Yes

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.006

Tested by:

Taicang ACT Sporting Goods Testing Co., Ltd.
No. 35 Zhenghe Road,
Ludu Town, Taicang City, Suzhou,
Jiangsu Province, China 215412
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IAS ACCREDITED Testing Laboratory

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017.) The Joint Communiqué is available on publications and resources page of the ILAC website at http://www.ilac.org. Accreditation listing and certificate can be found at http://www.iasonline.org.

Contract File No.: 904.14204
Test File: 006
Technician: Terry Liu
Test Date: 14 July 2023

Control Document: Official ACT BS EN 1078 Report Template CN 08 June 2023 Rev.9
SharePoint/GlobalResourceLibrary/Reporting/ReportTemplates/Helmets/EN

HELMET DATA

Brand:	LEATT	**Retention System:**	Nx/A
Model:	LT2323- MTB URBAN 2.0	**Age Grading:**	5 and older
Manufacturer:	DONGGUAN YIYANG SPORTS Co., Ltd.	**Test Headform Size:**	EN 960 Size 495 (A)
Date of Manufacture:	03/23	**Helmet Positioning Index (HPI):**	ACT Determined: 41 mm *Measured from the basic plane
Tested Size:	50-54 cm	**EPS Bead Color:**	Black

Helmet Number:	Weight (g):
1	436
2	441
3	437
4	443
Average:	440

Conditioned Temperatures	
Lab Humidity:	57%
Ambient Lab Temp.:	22°C
High Temperature	50°C
Low Temperature:	-20°C
Artificial Aging:	33°C

Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. The average helmet weight reported calculated by manufactures complete helmet weight. The individual weights listed in the table above for samples 1-4 are as prepped for testing to sections 5.4 through 5.6.
4. The helmets were exposed to the high (50 ± 2 °C) and low (-20 ± 2°C) temperatures for not less than 4 hours prior to testing and not exposed more than 6 hours.
5. Artificial ageing conducted in accordance to section 5.4.2.3: The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 125 W xenon-filled quartz lamp for 48 h at a range of 250 mm; spraying for 4 h to 6 h with water at ambient temperature at the rate of 1 l/min.
6. The sequence of tests performed on each helmet size and the tests performed on the same sample are given in the table below:

Table 2 — Sequence of Test and Tests per Sample

Performance Test	Sequence of Test	Sample Number		
Retention system effectiveness (5.6)	1st	1	---	---
Shock absorbing capacity (5.4)	2nd	1	2	3
Retention system strength (5.5)	3rd	---	2	3

7. The fourth sample is reserved as a reference sample, which can be used by the test laboratory in case of doubt about any of the performance requirements.

Reviewed by: John Bogler

Contract File No.: 904.14204
Test File: 006

Technician: Terry Liu
Test Date: 14 July 2023

TEST SUMMARY

Section	Requirement	Pass/Fail
4.1	**Materials:** For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	NT
4.2	**Construction:** The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. ***NOTE***: Helmets should: • have low weight • be ventilating • be easy to put on and take off • be usable with spectacles • not significantly interfere with the ability of the user to hear traffic noise	Pass
4.3	**Field of vision:** When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows: • horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides • upwards: min. 25° from the reference plane • downwards: min. 45° from the basic plane	Pass
4.4	**Shock absorbing capacity:** The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 *g* for the velocity of 5.42 +0.1, -0 m/s on the flat anvil, and 4.57 +0.1, -0 m/s on the kerbstone anvil. ***NOTE***: These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	Pass
4.5	**Durability:** After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	Pass
4.6	**Retention system:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	Pass
4.6.1	**General:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	Pass
4.6.2	**Chin Strap:** The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide. Chin straps may be fitted with means of enhancing comfort for the wearer.	Pass

4.6.3	**Fastening Device:** Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	**Pass**
4.6.4	**Color:** No part of the retention system shall be colored green.	**Pass**
4.6.5	**Strength:** When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. ***NOTE:*** In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	**Pass**
4.6.6	**Effectiveness:** When tested in accordance with 5.6 the helmet shall not come off the headform.	**Pass**
4.6.7	**Ease of Release:** Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	**Pass**
6	**Marking -** Each helmet shall be marked so that the following information is legible and easily visible to the user and is likely to remain legible throughout the life of the helmet:	**Pass**
	a) Number of the European Standard	**Pass**
	b) Name or trademark of the manufacturer	**Pass**
	c) Designation of the model	**Pass**
	d) Designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters	**Pass**
	e) Size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit	**Pass**
	f) Weight of the helmet (the average mass in grams determined according to 5.2)	**Pass**
	g) Year and quarter of manufacture	**Pass**
	h) The following text: "Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."	**Pass**
	In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.	**Pass**

	If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.	**Pass**

7	**Information supplied by the manufacturers (including importers):** With every helmet, clear information in the language of the country of sale shall be given as follows:	**---**
	a) That the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head;	**Pass**
	b) That the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm;	**Pass**
	c) How the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head);	**Pass**
	d) That a helmet cannot always protect against injury;	**Pass**
	e) That a helmet subjected to a severe impact should be discarded and destroyed;	**Pass**
	f) A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	**Pass**

RETENTION SYSTEM EFFECTIVENESS TEST SUMMARY

Helmet ID	Condition	Headform Size	Pass/Fail
904.14204.006-1	Ambient temperature	A	Pass

IMPACT TEST SUMMARY REPORT

Helmet ID	Condition	Headform Size	Impact Location	Anvil	Velocity (m/sec)	Peak Acc. (g)	Pass/Fail
				Requirement			
				KERBSTONE	4.57 m/s	≤250g	
				FLAT	5.42 m/s		
				Tolerance	-0/+0.1 m/s		
904.14204.006-1	High temperature	A	FRONT	KERBSTONE	4.64	120	Pass
			LF SIDE	FLAT	5.44	203	Pass
904.14204.006-2	Low temperature	A	REAR	FLAT	5.43	198	Pass
			CROWN	KERBSTONE	4.58	96	Pass
904.14204.006-3	Artificial aging	A	LF SIDE	KERBSTONE	4.66	130	Pass
			FRONT	FLAT	5.44	156	Pass

RETENTION SYSTEM STRENGTH TEST SUMMARY

Helmet ID	Condition	Headform Size	Dynamic Extension (mm)	Residual Extension (mm)	Pass/Fail
904.14204.006-2	Low temperature	A	25	9	Pass
904.14204.006-3	Artificial aging	A	26	12	Pass

FIELD OF VISION TEST SUMMARY

Requirements		Test Results
Horizontal	Minimum of 105º to the left and right sides	Pass
Upward	Minimum of 25º from the reference plan	Pass
Downward	Minimum of 45º from the basic plan	Pass

EQUIPMENT INFORMATION

DROP SYSTEM: CADEX Triaxial Impact Machine - Monorail
SOFTWARE: CADEX Impact Control Software

ITEM	MODEL	S/N
Test Computer	HP OptiPlex 5040	9HRYJG2
Data Acquisition Board	CADEX	13EC16A
Time Gate	CADEX	HVTG120120810-1
Control Center System	CADEX	CCS120120810-1

HEADFORMS

ITEM	HEADFORM	MODEL	ASSEMBLY WT., GRAMS
Headform	Full Headform	EN960 495 (A)	3167
Headform	Full Headform	EN960 535 (E)	4144
Headform	Full Headform	EN960 575 (J)	4741
Headform	Full Headform	EN960 605 (M)	5600
Headform	Full Headform	EN960 625 (O)	6175

IMPACT MEASURING SENSORS

ITEM	TYPE	MODEL	S/N
Tri-axial Accelerometer	Axis X (10.02 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Y (10.01 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Z (10.04 mV/g)	PCB 356B21	LW345303

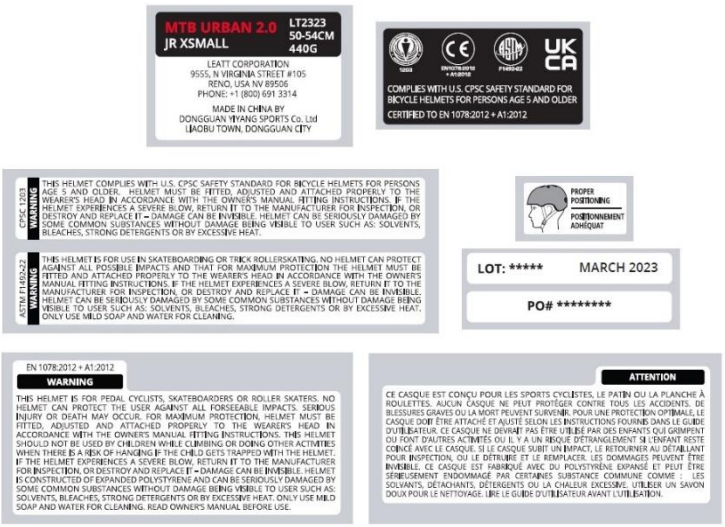
CONDITIONING EQUIPMENT

ITEM	MANUFACTURE	MODEL	S/N
Oven	BOXUN	92*9240MBE	8285
Oven	/	DHG-9426	1503338018
Oven	KENTON	KH-120A	2201-020
Freezer	Haier	DW-25W300	BE062100N00B29578VMO
Freezer	Haier	DW-50W225	F8LMJ
UV Ageing Chamber	HOTOTECH	HT-6014	12099
Hygrothermograph	Anymetre	TH-602F	3238

904.14204.006 – LT2323-MTB URBAN 2.0 (Green)

904.14204.006 – LT2323-MTB URBAN 2.0 (Green)

904.14204.006 – LT2323-MTB URBAN 2.0 (Green)



904.14204.006 – LT2323-MTB URBAN 2.0 (Green) – Labels

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

**********END OF REPORT**********

COMPLIANCE TESTING FOR BS EN 1078:2012+A1:2012 HELMETS USED FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS AND ROLLER SKATES

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: JR/XS (50-54 cm)
Lot Number	: TBD
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Yes

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.007

Tested by:

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Contract File No.: 904.14204
Test File: 007
Technician: Terry Liu
Test Date: 14 July 2023

Control Document: Official ACT BS EN 1078 Report Template CN 08 June 2023 Rev.9
SharePoint/GlobalResourceLibrary/Reporting/ReportTemplates/Helmets/EN

HELMET DATA

Brand:	LEATT	**Retention System:**	Nx/A
Model:	LT2323- MTB URBAN 2.0	**Age Grading:**	5 and older
Manufacturer:	DONGGUAN YIYANG SPORTS Co., Ltd.	**Test Headform Size:**	EN 960 Size 535 (E)
Date of Manufacture:	03/23	**Helmet Positioning Index (HPI):**	ACT Determined: 43 mm *Measured from the basic plane
Tested Size:	50-54 cm	**EPS Bead Color:**	Black

Helmet Number:	Weight (g):
1	437
2	436
3	440
4	441
Average:	440

Conditioned Temperatures	
Lab Humidity:	57%
Ambient Lab Temp.:	22°C
High Temperature	50°C
Low Temperature:	-20°C
Artificial Aging:	33°C

Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. The average helmet weight reported calculated by manufactures complete helmet weight. The individual weights listed in the table above for samples 1-4 are as prepped for testing to sections 5.4 through 5.6.
4. The helmets were exposed to the high (50 ± 2 °C) and low (-20 ± 2°C) temperatures for not less than 4 hours prior to testing and not exposed more than 6 hours.
5. Artificial ageing conducted in accordance to section 5.4.2.3: The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 125 W xenon-filled quartz lamp for 48 h at a range of 250 mm; spraying for 4 h to 6 h with water at ambient temperature at the rate of 1 l/min.
6. The sequence of tests performed on each helmet size and the tests performed on the same sample are given in the table below:

Table 2 — Sequence of Test and Tests per Sample

Performance Test	Sequence of Test	Sample Number		
Retention system effectiveness (5.6)	1st	1	---	---
Shock absorbing capacity (5.4)	2nd	1	2	3
Retention system strength (5.5)	3rd	---	2	3

7. The fourth sample is reserved as a reference sample, which can be used by the test laboratory in case of doubt about any of the performance requirements.

Reviewed by: John Bogler

Contract File No.: 904.14204
Test File: 007

Technician: Terry Liu
Test Date: 14 July 2023

TEST SUMMARY

Section	Requirement	Pass/Fail
4.1	**Materials:** For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	**NT**
4.2	**Construction:** The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. ***NOTE***: Helmets should: • have low weight • be ventilating • be easy to put on and take off • be usable with spectacles • not significantly interfere with the ability of the user to hear traffic noise	**Pass**
4.3	**Field of vision:** When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows: • horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides • upwards: min. 25° from the reference plane • downwards: min. 45° from the basic plane	**Pass**
4.4	**Shock absorbing capacity:** The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 *g* for the velocity of 5.42 +0.1, -0 m/s on the flat anvil, and 4.57 +0.1, -0 m/s on the kerbstone anvil. ***NOTE***: These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	**Pass**
4.5	**Durability:** After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	**Pass**
4.6	**Retention system:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.1	**General:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.2	**Chin Strap:** The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide. Chin straps may be fitted with means of enhancing comfort for the wearer.	**Pass**

4.6.3	**Fastening Device:** Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	**Pass**
4.6.4	**Color:** No part of the retention system shall be colored green.	**Pass**
4.6.5	**Strength:** When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. ***NOTE:*** In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	**Pass**
4.6.6	**Effectiveness:** When tested in accordance with 5.6 the helmet shall not come off the headform.	**Pass**
4.6.7	**Ease of Release:** Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	**Pass**
6	**Marking -** Each helmet shall be marked so that the following information is legible and easily visible to the user and is likely to remain legible throughout the life of the helmet:	**Pass**
	a) Number of the European Standard	**Pass**
	b) Name or trademark of the manufacturer	**Pass**
	c) Designation of the model	**Pass**
	d) Designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters	**Pass**
	e) Size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit	**Pass**
	f) Weight of the helmet (the average mass in grams determined according to 5.2)	**Pass**
	g) Year and quarter of manufacture	**Pass**
	h) The following text: "Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."	**Pass**
	In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.	**Pass**

	If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.	**Pass**

7	**Information supplied by the manufacturers (including importers):** With every helmet, clear information in the language of the country of sale shall be given as follows:	**---**
	a) That the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head;	**Pass**
	b) That the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm;	**Pass**
	c) How the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head);	**Pass**
	d) That a helmet cannot always protect against injury;	**Pass**
	e) That a helmet subjected to a severe impact should be discarded and destroyed;	**Pass**
	f) A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	**Pass**

RETENTION SYSTEM EFFECTIVENESS TEST SUMMARY

Helmet ID	Condition	Headform Size	Pass/Fail
904.14204.007-1	Ambient temperature	E	Pass

IMPACT TEST SUMMARY REPORT

Helmet ID	Condition	Headform Size	Impact Location	Anvil	Velocity (m/sec)	Peak Acc. (g)	Pass/Fail
				Requirement			
				KERBSTONE	4.57 m/s	≤250g	
				FLAT	5.42 m/s		
				Tolerance	-0/+0.1 m/s		
904.14204.007-1	High temperature	E	FRONT	KERBSTONE	4.62	92	Pass
			LF SIDE	FLAT	5.43	195	Pass
904.14204.007-2	Low temperature	E	REAR	FLAT	5.52	184	Pass
			CROWN	KERBSTONE	4.66	121	Pass
904.14204.007-3	Artificial aging	E	LF SIDE	KERBSTONE	4.59	126	Pass
			FRONT	FLAT	5.43	133	Pass

RETENTION SYSTEM STRENGTH TEST SUMMARY

Helmet ID	Condition	Headform Size	Dynamic Extension (mm)	Residual Extension (mm)	Pass/Fail
904.14204.007-2	Low temperature	E	24	10	Pass
904.14204.007-3	Artificial aging	E	22	7	Pass

FIELD OF VISION TEST SUMMARY

Requirements		Test Results
Horizontal	Minimum of 105º to the left and right sides	Pass
Upward	Minimum of 25º from the reference plan	Pass
Downward	Minimum of 45º from the basic plan	Pass

Contract File No.: 904.14204
Test File: 007
Control Document: Official ACT BS EN 1078 Report Template CN 08 June 2023 Rev.9
SharePoint/GlobalResourceLibrary/Reporting/ReportTemplates/Helmets/EN

Technician: Terry Liu
Test Date: 14 July 2023

EQUIPMENT INFORMATION

DROP SYSTEM: CADEX Triaxial Impact Machine - Monorail
SOFTWARE: CADEX Impact Control Software

ITEM	MODEL	S/N
Test Computer	HP OptiPlex 5040	9HRYJG2
Data Acquisition Board	CADEX	13EC16A
Time Gate	CADEX	HVTG120120810-1
Control Center System	CADEX	CCS120120810-1

HEADFORMS

ITEM	HEADFORM	MODEL	ASSEMBLY WT., GRAMS
Headform	Full Headform	EN960 495 (A)	3167
Headform	Full Headform	EN960 535 (E)	4144
Headform	Full Headform	EN960 575 (J)	4741
Headform	Full Headform	EN960 605 (M)	5600
Headform	Full Headform	EN960 625 (O)	6175

IMPACT MEASURING SENSORS

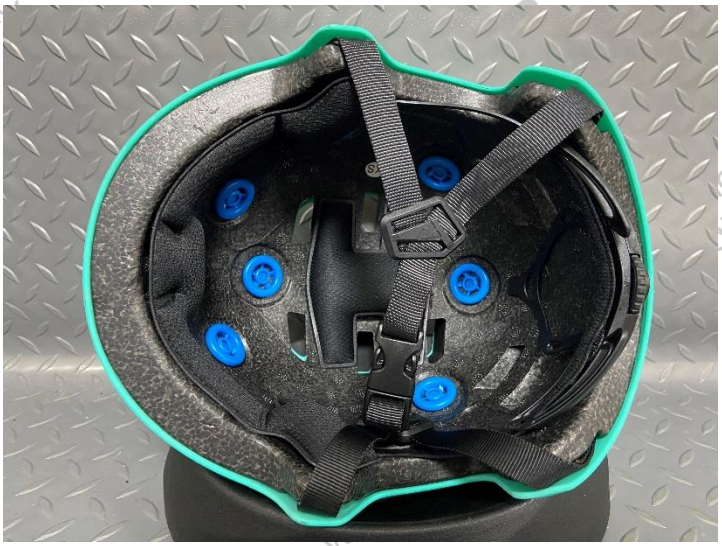
ITEM	TYPE	MODEL	S/N
Tri-axial Accelerometer	Axis X (10.02 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Y (10.01 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Z (10.04 mV/g)	PCB 356B21	LW345303

CONDITIONING EQUIPMENT

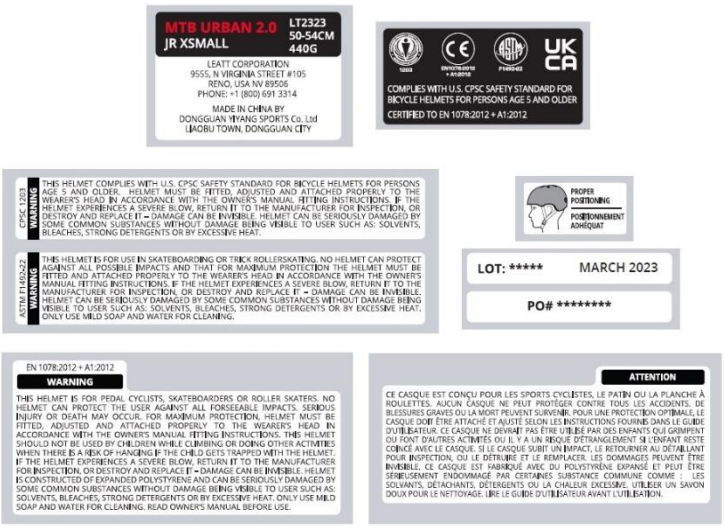
ITEM	MANUFACTURE	MODEL	S/N
Oven	BOXUN	92*9240MBE	8285
Oven	/	DHG-9426	1503338018
Oven	KENTON	KH-120A	2201-020
Freezer	Haier	DW-25W300	BE062100N00B29578VMO
Freezer	Haier	DW-50W225	F8LMJ
UV Ageing Chamber	HOTOTECH	HT-6014	12099
Hygrothermograph	Anymetre	TH-602F	3238

904.14204.007 – LT2323-MTB URBAN 2.0 (Green)

904.14204.007 – LT2323-MTB URBAN 2.0 (Green)



904.14204.007 – LT2323-MTB URBAN 2.0 (Green)



904.14204.007 – LT2323-MTB URBAN 2.0 (Green) – Labels

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7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

**********END OF REPORT**********

COMPLIANCE TESTING FOR BS EN 1078:2012+A1:2012 HELMETS USED FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS AND ROLLER SKATES

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: S (51-55 cm)
Lot Number	: TBD
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.010

Tested by:

Taicang ACT Sporting Goods Testing Co., Ltd.
No. 35 Zhenghe Road,
Ludu Town, Taicang City, Suzhou,
Jiangsu Province, China 215412
www.act-lab.com

IAS ACCREDITED Testing Laboratory

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017.) The Joint Communiqué is available on publications and resources page of the ILAC website at http://www.ilac.org. Accreditation listing and certificate can be found at http://www.iasonline.org.

Contract File No.: 904.14204
Test File: 010
Technician: Terry Liu
Test Date: 14 July 2023

HELMET DATA

Brand:	LEATT	**Retention System:**	Nx/A
Model:	LT2323- MTB URBAN 2.0	**Age Grading:**	5 and older
Manufacturer:	DONGGUAN YIYANG SPORTS Co., Ltd.	**Test Headform Size:**	EN 960 Size 535 (E)
Date of Manufacture:	03/23	**Helmet Positioning Index (HPI):**	ACT Determined: 43 mm *Measured from the basic plane
Tested Size:	51-55 cm	**EPS Bead Color:**	Black

Helmet Number:	Weight (g):
1	440
2	437
3	440
4	436
Average:	440

Conditioned Temperatures	
Lab Humidity:	57%
Ambient Lab Temp.:	22°C
High Temperature	50°C
Low Temperature:	-20°C
Artificial Aging:	33°C

Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. The average helmet weight reported calculated by manufactures complete helmet weight. The individual weights listed in the table above for samples 1-4 are as prepped for testing to sections 5.4 through 5.6.
4. The helmets were exposed to the high (50 ± 2 °C) and low (-20 ± 2°C) temperatures for not less than 4 hours prior to testing and not exposed more than 6 hours.
5. Artificial ageing conducted in accordance to section 5.4.2.3: The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 125 W xenon-filled quartz lamp for 48 h at a range of 250 mm; spraying for 4 h to 6 h with water at ambient temperature at the rate of 1 l/min.
6. The sequence of tests performed on each helmet size and the tests performed on the same sample are given in the table below:

Table 2 — Sequence of Test and Tests per Sample

Performance Test	Sequence of Test	Sample Number		
Retention system effectiveness (5.6)	1st	1	---	---
Shock absorbing capacity (5.4)	2nd	1	2	3
Retention system strength (5.5)	3rd	---	2	3

7. The fourth sample is reserved as a reference sample, which can be used by the test laboratory in case of doubt about any of the performance requirements.

Reviewed by: John Bogler

Contract File No.: 904.14204
Test File: 010

Technician: Terry Liu
Test Date: 14 July 2023

TEST SUMMARY

Section	Requirement	Pass/Fail
4.1	**Materials:** For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	**NT**
4.2	**Construction:** The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. ***NOTE***: Helmets should: • have low weight • be ventilating • be easy to put on and take off • be usable with spectacles • not significantly interfere with the ability of the user to hear traffic noise	**Pass**
4.3	**Field of vision:** When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows: • horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides • upwards: min. 25° from the reference plane • downwards: min. 45° from the basic plane	**Pass**
4.4	**Shock absorbing capacity:** The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 *g* for the velocity of 5.42 +0.1, -0 m/s on the flat anvil, and 4.57 +0.1, -0 m/s on the kerbstone anvil. ***NOTE***: These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	**Pass**
4.5	**Durability:** After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	**Pass**
4.6	**Retention system:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.1	**General:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.2	**Chin Strap:** The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide. Chin straps may be fitted with means of enhancing comfort for the wearer.	**Pass**

4.6.3	**Fastening Device:** Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	**Pass**
4.6.4	**Color:** No part of the retention system shall be colored green.	**Pass**
4.6.5	**Strength:** When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. ***NOTE:*** In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	**Pass**
4.6.6	**Effectiveness:** When tested in accordance with 5.6 the helmet shall not come off the headform.	**Pass**
4.6.7	**Ease of Release:** Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	**Pass**
6	**Marking -** Each helmet shall be marked so that the following information is legible and easily visible to the user and is likely to remain legible throughout the life of the helmet:	**Pass**
	a) Number of the European Standard	**Pass**
	b) Name or trademark of the manufacturer	**Pass**
	c) Designation of the model	**Pass**
	d) Designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters	**Pass**
	e) Size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit	**Pass**
	f) Weight of the helmet (the average mass in grams determined according to 5.2)	**Pass**
	g) Year and quarter of manufacture	**Pass**
	h) The following text: "Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."	**Pass**
	In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.	**Pass**

	If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.	**Pass**

7	**Information supplied by the manufacturers (including importers):** With every helmet, clear information in the language of the country of sale shall be given as follows:	**---**
	a) That the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head;	**Pass**
	b) That the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm;	**Pass**
	c) How the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head);	**Pass**
	d) That a helmet cannot always protect against injury;	**Pass**
	e) That a helmet subjected to a severe impact should be discarded and destroyed;	**Pass**
	f) A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	**Pass**

RETENTION SYSTEM EFFECTIVENESS TEST SUMMARY

Helmet ID	Condition	Headform Size	Pass/Fail
904.14204.010-1	Ambient temperature	E	Pass

IMPACT TEST SUMMARY REPORT

Helmet ID	Condition	Headform Size	Impact Location	Anvil	Velocity (m/sec)	Peak Acc. (g)	Pass/Fail
				Requirement			
				KERBSTONE	4.57 m/s	≤250g	
				FLAT	5.42 m/s		
				Tolerance	-0/+0.1 m/s		
904.14204.010-1	High temperature	E	FRONT	KERBSTONE	4.60	99	Pass
			LF SIDE	FLAT	5.42	202	Pass
904.14204.010-2	Low temperature	E	REAR	FLAT	5.46	186	Pass
			CROWN	KERBSTONE	4.64	124	Pass
904.14204.010-3	Artificial aging	E	LF SIDE	KERBSTONE	4.59	134	Pass
			FRONT	FLAT	5.51	121	Pass

RETENTION SYSTEM STRENGTH TEST SUMMARY

Helmet ID	Condition	Headform Size	Dynamic Extension (mm)	Residual Extension (mm)	Pass/Fail
904.14204.010-2	Low temperature	E	26	11	Pass
904.14204.010-3	Artificial aging	E	25	10	Pass

FIELD OF VISION TEST SUMMARY

Requirements		Test Results
Horizontal	Minimum of 105º to the left and right sides	Pass
Upward	Minimum of 25º from the reference plan	Pass
Downward	Minimum of 45º from the basic plan	Pass

EQUIPMENT INFORMATION

DROP SYSTEM: CADEX Triaxial Impact Machine - Monorail
SOFTWARE: CADEX Impact Control Software

ITEM	MODEL	S/N
Test Computer	HP OptiPlex 5040	9HRYJG2
Data Acquisition Board	CADEX	13EC16A
Time Gate	CADEX	HVTG120120810-1
Control Center System	CADEX	CCS120120810-1

HEADFORMS

ITEM	HEADFORM	MODEL	ASSEMBLY WT., GRAMS
Headform	Full Headform	EN960 495 (A)	3167
Headform	Full Headform	EN960 535 (E)	4144
Headform	Full Headform	EN960 575 (J)	4741
Headform	Full Headform	EN960 605 (M)	5600
Headform	Full Headform	EN960 625 (O)	6175

IMPACT MEASURING SENSORS

ITEM	TYPE	MODEL	S/N
Tri-axial Accelerometer	Axis X (10.02 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Y (10.01 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Z (10.04 mV/g)	PCB 356B21	LW345303

CONDITIONING EQUIPMENT

ITEM	MANUFACTURE	MODEL	S/N
Oven	BOXUN	92*9240MBE	8285
Oven	/	DHG-9426	1503338018
Oven	KENTON	KH-120A	2201-020
Freezer	Haier	DW-25W300	BE062100N00B29578VMO
Freezer	Haier	DW-50W225	F8LMJ
UV Ageing Chamber	HOTOTECH	HT-6014	12099
Hygrothermograph	Anymetre	TH-602F	3238

904.14204.010 – LT2323-MTB URBAN 2.0 (Green)

904.14204.010 – LT2323-MTB URBAN 2.0 (Green)

904.14204.010 – LT2323-MTB URBAN 2.0 (Green)

904.14204.010 – LT2323-MTB URBAN 2.0 (Green) – Labels

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

**********END OF REPORT**********

COMPLIANCE TESTING FOR BS EN 1078:2012+A1:2012 HELMETS USED FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS AND ROLLER SKATES

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: M (55-59 cm)
Lot Number	: TBD
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.003

Tested by:

Taicang ACT Sporting Goods Testing Co., Ltd.
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Ludu Town, Taicang City, Suzhou,
Jiangsu Province, China 215412
www.act-lab.com

IAS ACCREDITED Testing Laboratory

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017.) The Joint Communiqué is available on publications and resources page of the ILAC website at http://www.ilac.org. Accreditation listing and certificate can be found at http://www.iasonline.org.

Contract File No.: 904.14204
Test File: 003
Technician: Terry Liu
Test Date: 10 July 2023

Control Document: Official ACT BS EN 1078 Report Template CN 08 June 2023 Rev.9
SharePoint/GlobalResourceLibrary/Reporting/ReportTemplates/Helmets/EN

HELMET DATA

Brand:	LEATT	**Retention System:**	Nx/A
Model:	LT2323- MTB URBAN 2.0	**Age Grading:**	5 and older
Manufacturer:	DONGGUAN YIYANG SPORTS Co., Ltd.	**Test Headform Size:**	EN 960 Size 575 (J)
Date of Manufacture:	03/23	**Helmet Positioning Index (HPI):**	ACT Determined: 44 mm *Measured from the basic plane
Tested Size:	55-59 cm	**EPS Bead Color:**	Black

Helmet Number:	Weight (g):
1	465
2	465
3	467
4	463
Average:	470

Conditioned Temperatures	
Lab Humidity:	57%
Ambient Lab Temp.:	22°C
High Temperature	50°C
Low Temperature:	-20°C
Artificial Aging:	33°C

Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. The average helmet weight reported calculated by manufactures complete helmet weight. The individual weights listed in the table above for samples 1-4 are as prepped for testing to sections 5.4 through 5.6.
4. The helmets were exposed to the high (50 ± 2 °C) and low (-20 ± 2°C) temperatures for not less than 4 hours prior to testing and not exposed more than 6 hours.
5. Artificial ageing conducted in accordance to section 5.4.2.3: The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 125 W xenon-filled quartz lamp for 48 h at a range of 250 mm; spraying for 4 h to 6 h with water at ambient temperature at the rate of 1 l/min.
6. The sequence of tests performed on each helmet size and the tests performed on the same sample are given in the table below:

Table 2 — Sequence of Test and Tests per Sample

Performance Test	Sequence of Test	Sample Number		
Retention system effectiveness (5.6)	1st	1	---	---
Shock absorbing capacity (5.4)	2nd	1	2	3
Retention system strength (5.5)	3rd	---	2	3

7. The fourth sample is reserved as a reference sample, which can be used by the test laboratory in case of doubt about any of the performance requirements.

Reviewed by: John Bogler

Contract File No.: 904.14204
Test File: 003

Technician: Terry Liu
Test Date: 10 July 2023

TEST SUMMARY

Section	Requirement	Pass/Fail
4.1	**Materials:** For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	**NT**
4.2	**Construction:** The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. ***NOTE***: Helmets should: • have low weight • be ventilating • be easy to put on and take off • be usable with spectacles • not significantly interfere with the ability of the user to hear traffic noise	**Pass**
4.3	**Field of vision:** When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows: • horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides • upwards: min. 25° from the reference plane • downwards: min. 45° from the basic plane	**Pass**
4.4	**Shock absorbing capacity:** The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 *g* for the velocity of 5.42 +0.1, -0 m/s on the flat anvil, and 4.57 +0.1, -0 m/s on the kerbstone anvil. ***NOTE***: These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	**Pass**
4.5	**Durability:** After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	**Pass**
4.6	**Retention system:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.1	**General:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.2	**Chin Strap:** The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide. Chin straps may be fitted with means of enhancing comfort for the wearer.	**Pass**

4.6.3	**Fastening Device:** Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	**Pass**
4.6.4	**Color:** No part of the retention system shall be colored green.	**Pass**
4.6.5	**Strength:** When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. ***NOTE:*** In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	**Pass**
4.6.6	**Effectiveness:** When tested in accordance with 5.6 the helmet shall not come off the headform.	**Pass**
4.6.7	**Ease of Release:** Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	**Pass**
6	**Marking -** Each helmet shall be marked so that the following information is legible and easily visible to the user and is likely to remain legible throughout the life of the helmet:	**Pass**
	a) Number of the European Standard	**Pass**
	b) Name or trademark of the manufacturer	**Pass**
	c) Designation of the model	**Pass**
	d) Designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters	**Pass**
	e) Size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit	**Pass**
	f) Weight of the helmet (the average mass in grams determined according to 5.2)	**Pass**
	g) Year and quarter of manufacture	**Pass**
	h) The following text: "Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."	**Pass**
	In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.	**Pass**

	If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.	**Pass**

7	**Information supplied by the manufacturers (including importers):** With every helmet, clear information in the language of the country of sale shall be given as follows:	**---**
	a) That the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head;	**Pass**
	b) That the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm;	**Pass**
	c) How the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head);	**Pass**
	d) That a helmet cannot always protect against injury;	**Pass**
	e) That a helmet subjected to a severe impact should be discarded and destroyed;	**Pass**
	f) A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	**Pass**

RETENTION SYSTEM EFFECTIVENESS TEST SUMMARY

Helmet ID	Condition	Headform Size	Pass/Fail
904.14204.003-1	Ambient temperature	J	Pass

IMPACT TEST SUMMARY REPORT

Helmet ID	Condition	Headform Size	Impact Location	Anvil	Velocity (m/sec)	Peak Acc. (g)	Pass/Fail
				Requirement			
				KERBSTONE	4.57 m/s	≤250g	
				FLAT	5.42 m/s		
				Tolerance	-0/+0.1 m/s		
904.14204.003-1	High temperature	J	FRONT	KERBSTONE	4.65	92	Pass
			LF SIDE	FLAT	5.51	200	Pass
904.14204.003-2	Low temperature	J	REAR	FLAT	5.48	157	Pass
			CROWN	KERBSTONE	4.61	119	Pass
904.14204.003-3	Artificial aging	J	LF SIDE	KERBSTONE	4.58	128	Pass
			FRONT	FLAT	5.46	122	Pass

RETENTION SYSTEM STRENGTH TEST SUMMARY

Helmet ID	Condition	Headform Size	Dynamic Extension (mm)	Residual Extension (mm)	Pass/Fail
904.14204.003-2	Low temperature	J	23	9	Pass
904.14204.003-3	Artificial aging	J	20	7	Pass

FIELD OF VISION TEST SUMMARY

Requirements		Test Results
Horizontal	Minimum of 105º to the left and right sides	Pass
Upward	Minimum of 25º from the reference plan	Pass
Downward	Minimum of 45º from the basic plan	Pass

EQUIPMENT INFORMATION

DROP SYSTEM: CADEX Triaxial Impact Machine - Monorail
SOFTWARE: CADEX Impact Control Software

ITEM	MODEL	S/N
Test Computer	HP OptiPlex 5040	9HRYJG2
Data Acquisition Board	CADEX	13EC16A
Time Gate	CADEX	HVTG120120810-1
Control Center System	CADEX	CCS120120810-1

HEADFORMS

ITEM	HEADFORM	MODEL	ASSEMBLY WT., GRAMS
Headform	Full Headform	EN960 495 (A)	3167
Headform	Full Headform	EN960 535 (E)	4144
Headform	Full Headform	EN960 575 (J)	4741
Headform	Full Headform	EN960 605 (M)	5600
Headform	Full Headform	EN960 625 (O)	6175

IMPACT MEASURING SENSORS

ITEM	TYPE	MODEL	S/N
Tri-axial Accelerometer	Axis X (10.02 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Y (10.01 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Z (10.04 mV/g)	PCB 356B21	LW345303

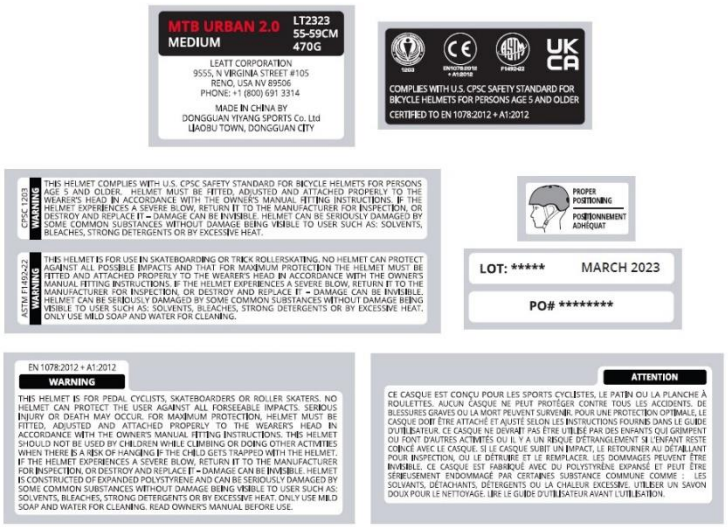
CONDITIONING EQUIPMENT

ITEM	MANUFACTURE	MODEL	S/N
Oven	BOXUN	92*9240MBE	8285
Oven	/	DHG-9426	1503338018
Oven	KENTON	KH-120A	2201-020
Freezer	Haier	DW-25W300	BE062100N00B29578VMO
Freezer	Haier	DW-50W225	F8LMJ
UV Ageing Chamber	HOTOTECH	HT-6014	12099
Hygrothermograph	Anymetre	TH-602F	3238

904.14204.003 – LT2323-MTB URBAN 2.0 (White)

904.14204.003 – LT2323-MTB URBAN 2.0 (White)

904.14204.003 – LT2323-MTB URBAN 2.0 (White)



904.14204.003 – LT2323-MTB URBAN 2.0 (White) – Labels

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

**********END OF REPORT**********

COMPLIANCE TESTING FOR BS EN 1078:2012+A1:2012 HELMETS USED FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS AND ROLLER SKATES

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: L (59-63 cm)
Lot Number	: TBD
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.013

Tested by:

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Jiangsu Province, China 215412
www.act-lab.com

IAS ACCREDITED Testing Laboratory

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017.) The Joint Communiqué is available on publications and resources page of the ILAC website at http://www.ilac.org. Accreditation listing and certificate can be found at http://www.iasonline.org.

Contract File No.: 904.14204
Test File: 013
Technician: Terry Liu
Test Date: 17 July 2023

HELMET DATA

Brand:	LEATT	**Retention System:**	Nx/A
Model:	LT2323- MTB URBAN 2.0	**Age Grading:**	5 and older
Manufacturer:	DONGGUAN YIYANG SPORTS Co., Ltd.	**Test Headform Size:**	EN 960 Size 605 (M)
Date of Manufacture:	03/23	**Helmet Positioning Index (HPI):**	ACT Determined: 47 mm *Measured from the basic plane
Tested Size:	59-63 cm	**EPS Bead Color:**	Black

Helmet Number:	Weight (g):
1	506
2	508
3	508
4	507
Average:	510

Conditioned Temperatures	
Lab Humidity:	57%
Ambient Lab Temp.:	22°C
High Temperature	50°C
Low Temperature:	-20°C
Artificial Aging:	33°C

Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. The average helmet weight reported calculated by manufactures complete helmet weight. The individual weights listed in the table above for samples 1-4 are as prepped for testing to sections 5.4 through 5.6.
4. The helmets were exposed to the high (50 ± 2 °C) and low (-20 ± 2°C) temperatures for not less than 4 hours prior to testing and not exposed more than 6 hours.
5. Artificial ageing conducted in accordance to section 5.4.2.3: The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 125 W xenon-filled quartz lamp for 48 h at a range of 250 mm; spraying for 4 h to 6 h with water at ambient temperature at the rate of 1 l/min.
6. The sequence of tests performed on each helmet size and the tests performed on the same sample are given in the table below:

Table 2 — Sequence of Test and Tests per Sample

Performance Test	Sequence of Test	Sample Number		
Retention system effectiveness (5.6)	1st	1	---	---
Shock absorbing capacity (5.4)	2nd	1	2	3
Retention system strength (5.5)	3rd	---	2	3

7. The fourth sample is reserved as a reference sample, which can be used by the test laboratory in case of doubt about any of the performance requirements.

Reviewed by: John Bogler

Contract File No.: 904.14204
Test File: 013

Technician: Terry Liu
Test Date: 17 July 2023

TEST SUMMARY

Section	Requirement	Pass/Fail
4.1	**Materials:** For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	**NT**
4.2	**Construction:** The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. ***NOTE***: Helmets should: • have low weight • be ventilating • be easy to put on and take off • be usable with spectacles • not significantly interfere with the ability of the user to hear traffic noise	**Pass**
4.3	**Field of vision:** When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows: • horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides • upwards: min. 25° from the reference plane • downwards: min. 45° from the basic plane	**Pass**
4.4	**Shock absorbing capacity:** The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 *g* for the velocity of 5.42 +0.1, -0 m/s on the flat anvil, and 4.57 +0.1, -0 m/s on the kerbstone anvil. ***NOTE***: These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	**Pass**
4.5	**Durability:** After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	**Pass**
4.6	**Retention system:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.1	**General:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	**Pass**
4.6.2	**Chin Strap:** The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide. Chin straps may be fitted with means of enhancing comfort for the wearer.	**Pass**

4.6.3	**Fastening Device:** Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	**Pass**
4.6.4	**Color:** No part of the retention system shall be colored green.	**Pass**
4.6.5	**Strength:** When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. ***NOTE:*** In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	**Pass**
4.6.6	**Effectiveness:** When tested in accordance with 5.6 the helmet shall not come off the headform.	**Pass**
4.6.7	**Ease of Release:** Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	**Pass**
6	**Marking -** Each helmet shall be marked so that the following information is legible and easily visible to the user and is likely to remain legible throughout the life of the helmet:	**Pass**
	a) Number of the European Standard	**Pass**
	b) Name or trademark of the manufacturer	**Pass**
	c) Designation of the model	**Pass**
	d) Designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters	**Pass**
	e) Size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit	**Pass**
	f) Weight of the helmet (the average mass in grams determined according to 5.2)	**Pass**
	g) Year and quarter of manufacture	**Pass**
	h) The following text: "Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."	**Pass**
	In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.	**Pass**

	If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.	**Pass**

7	**Information supplied by the manufacturers (including importers):** With every helmet, clear information in the language of the country of sale shall be given as follows:	**---**
	a) That the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head;	**Pass**
	b) That the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm;	**Pass**
	c) How the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head);	**Pass**
	d) That a helmet cannot always protect against injury;	**Pass**
	e) That a helmet subjected to a severe impact should be discarded and destroyed;	**Pass**
	f) A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	**Pass**

RETENTION SYSTEM EFFECTIVENESS TEST SUMMARY

Helmet ID	Condition	Headform Size	Pass/Fail
904.14204.013-1	Ambient temperature	M	Pass

IMPACT TEST SUMMARY REPORT

Helmet ID	Condition	Headform Size	Impact Location	Anvil	Velocity (m/sec)	Peak Acc. (g)	Pass/Fail
				Requirement			
				KERBSTONE	4.57 m/s	≤250g	
				FLAT	5.42 m/s		
				Tolerance	-0/+0.1 m/s		
904.14204.013-1	High temperature	M	FRONT	KERBSTONE	4.60	93	Pass
			LF SIDE	FLAT	5.45	205	Pass
904.14204.013-2	Low temperature	M	REAR	FLAT	5.50	212	Pass
			CROWN	KERBSTONE	4.59	108	Pass
904.14204.013-3	Artificial aging	M	LF SIDE	KERBSTONE	4.66	126	Pass
			FRONT	FLAT	5.47	152	Pass

RETENTION SYSTEM STRENGTH TEST SUMMARY

Helmet ID	Condition	Headform Size	Dynamic Extension (mm)	Residual Extension (mm)	Pass/Fail
904.14204.013-2	Low temperature	M	26	11	Pass
904.14204.013-3	Artificial aging	M	27	11	Pass

FIELD OF VISION TEST SUMMARY

Requirements		Test Results
Horizontal	Minimum of 105º to the left and right sides	Pass
Upward	Minimum of 25º from the reference plan	Pass
Downward	Minimum of 45º from the basic plan	Pass

EQUIPMENT INFORMATION

DROP SYSTEM: CADEX Triaxial Impact Machine - Monorail
SOFTWARE: CADEX Impact Control Software

ITEM	MODEL	S/N
Test Computer	HP OptiPlex 5040	9HRYJG2
Data Acquisition Board	CADEX	13EC16A
Time Gate	CADEX	HVTG120120810-1
Control Center System	CADEX	CCS120120810-1

HEADFORMS

ITEM	HEADFORM	MODEL	ASSEMBLY WT., GRAMS
Headform	Full Headform	EN960 495 (A)	3167
Headform	Full Headform	EN960 535 (E)	4144
Headform	Full Headform	EN960 575 (J)	4741
Headform	Full Headform	EN960 605 (M)	5600
Headform	Full Headform	EN960 625 (O)	6175

IMPACT MEASURING SENSORS

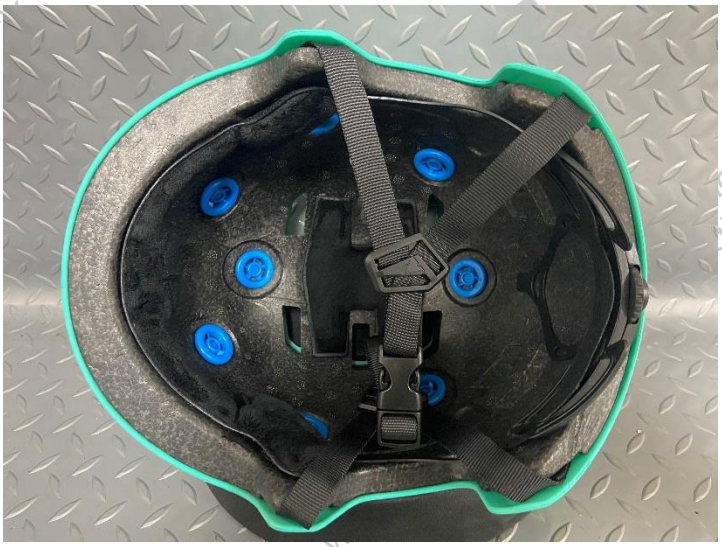
ITEM	TYPE	MODEL	S/N
Tri-axial Accelerometer	Axis X (10.02 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Y (10.01 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Z (10.04 mV/g)	PCB 356B21	LW345303

CONDITIONING EQUIPMENT

ITEM	MANUFACTURE	MODEL	S/N
Oven	BOXUN	92*9240MBE	8285
Oven	/	DHG-9426	1503338018
Oven	KENTON	KH-120A	2201-020
Freezer	Haier	DW-25W300	BE062100N00B29578VMO
Freezer	Haier	DW-50W225	F8LMJ
UV Ageing Chamber	HOTOTECH	HT-6014	12099
Hygrothermograph	Anymetre	TH-602F	3238

904.14204.013 – LT2323-MTB URBAN 2.0 (Green)

904.14204.013 – LT2323-MTB URBAN 2.0 (Green)



904.14204.013 – LT2323-MTB URBAN 2.0 (Green)

904.14204.013 – LT2323-MTB URBAN 2.0 (Green) – Labels

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

**********END OF REPORT**********

COMPLIANCE TESTING FOR BS EN 1078:2012+A1:2012 HELMETS USED FOR PEDAL CYCLISTS AND FOR USERS OF SKATEBOARDS AND ROLLER SKATES

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: L (59-63 cm)
Lot Number	: TBD
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.014

Tested by:

Taicang ACT Sporting Goods Testing Co., Ltd.
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IAS ACCREDITED Testing Laboratory

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Contract File No.: 904.14204
Test File: 014
Technician: Terry Liu
Test Date: 17 July 2023

HELMET DATA

Brand:	LEATT	**Retention System:**	Nx/A
Model:	LT2323- MTB URBAN 2.0	**Age Grading:**	5 and older
Manufacturer:	DONGGUAN YIYANG SPORTS Co., Ltd.	**Test Headform Size:**	EN 960 Size 625 (O)
Date of Manufacture:	03/23	**Helmet Positioning Index (HPI):**	ACT Determined: 48 mm *Measured from the basic plane
Tested Size:	59-63 cm	**EPS Bead Color:**	Black

Helmet Number:	Weight (g):
1	509
2	505
3	508
4	508
Average:	510

Conditioned Temperatures	
Lab Humidity:	57%
Ambient Lab Temp.:	22°C
High Temperature	50°C
Low Temperature:	-20°C
Artificial Aging:	33°C

Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. The average helmet weight reported calculated by manufactures complete helmet weight. The individual weights listed in the table above for samples 1-4 are as prepped for testing to sections 5.4 through 5.6.
4. The helmets were exposed to the high (50 ± 2 °C) and low (-20 ± 2°C) temperatures for not less than 4 hours prior to testing and not exposed more than 6 hours.
5. Artificial ageing conducted in accordance to section 5.4.2.3: The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 125 W xenon-filled quartz lamp for 48 h at a range of 250 mm; spraying for 4 h to 6 h with water at ambient temperature at the rate of 1 l/min.
6. The sequence of tests performed on each helmet size and the tests performed on the same sample are given in the table below:

Table 2 — Sequence of Test and Tests per Sample

Performance Test	Sequence of Test	Sample Number		
Retention system effectiveness (5.6)	1st	1	---	---
Shock absorbing capacity (5.4)	2nd	1	2	3
Retention system strength (5.5)	3rd	---	2	3

7. The fourth sample is reserved as a reference sample, which can be used by the test laboratory in case of doubt about any of the performance requirements.

Reviewed by: John Bogler

Contract File No.: 904.14204
Test File: 014

Technician: Terry Liu
Test Date: 17 July 2023

TEST SUMMARY

Section	Requirement	Pass/Fail
4.1	**Materials:** For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	NT
4.2	**Construction:** The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. ***NOTE***: Helmets should: • have low weight • be ventilating • be easy to put on and take off • be usable with spectacles • not significantly interfere with the ability of the user to hear traffic noise	Pass
4.3	**Field of vision:** When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows: • horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides • upwards: min. 25° from the reference plane • downwards: min. 45° from the basic plane	Pass
4.4	**Shock absorbing capacity:** The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 *g* for the velocity of 5.42 +0.1, -0 m/s on the flat anvil, and 4.57 +0.1, -0 m/s on the kerbstone anvil. ***NOTE***: These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	Pass
4.5	**Durability:** After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	Pass
4.6	**Retention system:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	Pass
4.6.1	**General:** Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	Pass
4.6.2	**Chin Strap:** The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide. Chin straps may be fitted with means of enhancing comfort for the wearer.	Pass

4.6.3	**Fastening Device:** Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	**Pass**
4.6.4	**Color:** No part of the retention system shall be colored green.	**Pass**
4.6.5	**Strength:** When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. ***NOTE:*** In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	**Pass**
4.6.6	**Effectiveness:** When tested in accordance with 5.6 the helmet shall not come off the headform.	**Pass**
4.6.7	**Ease of Release:** Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	**Pass**
6	**Marking -** Each helmet shall be marked so that the following information is legible and easily visible to the user and is likely to remain legible throughout the life of the helmet:	**Pass**
	a) Number of the European Standard	**Pass**
	b) Name or trademark of the manufacturer	**Pass**
	c) Designation of the model	**Pass**
	d) Designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters	**Pass**
	e) Size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit	**Pass**
	f) Weight of the helmet (the average mass in grams determined according to 5.2)	**Pass**
	g) Year and quarter of manufacture	**Pass**
	h) The following text: "Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."	**Pass**
	In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.	**Pass**

	If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.	**Pass**

7	**Information supplied by the manufacturers (including importers):** With every helmet, clear information in the language of the country of sale shall be given as follows:	**---**
	a) That the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head;	**Pass**
	b) That the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm;	**Pass**
	c) How the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head);	**Pass**
	d) That a helmet cannot always protect against injury;	**Pass**
	e) That a helmet subjected to a severe impact should be discarded and destroyed;	**Pass**
	f) A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	**Pass**

RETENTION SYSTEM EFFECTIVENESS TEST SUMMARY

Helmet ID	Condition	Headform Size	Pass/Fail
904.14204.014-1	Ambient temperature	O	Pass

IMPACT TEST SUMMARY REPORT

Helmet ID	Condition	Headform Size	Impact Location	Anvil	Velocity (m/sec)	Peak Acc. (g)	Pass/Fail
				Requirement			
				KERBSTONE	4.57 m/s	≤250g	
				FLAT	5.42 m/s		
				Tolerance	-0/+0.1 m/s		
904.14204.014-1	High temperature	O	FRONT	KERBSTONE	4.59	126	Pass
			LF SIDE	FLAT	5.45	195	Pass
904.14204.014-2	Low temperature	O	REAR	FLAT	5.47	156	Pass
			CROWN	KERBSTONE	4.63	119	Pass
904.14204.014-3	Artificial aging	O	LF SIDE	KERBSTONE	4.58	121	Pass
			FRONT	FLAT	5.51	126	Pass

RETENTION SYSTEM STRENGTH TEST SUMMARY

Helmet ID	Condition	Headform Size	Dynamic Extension (mm)	Residual Extension (mm)	Pass/Fail
904.14204.014-2	Low temperature	O	25	13	Pass
904.14204.014-3	Artificial aging	O	27	13	Pass

FIELD OF VISION TEST SUMMARY

Requirements		Test Results
Horizontal	Minimum of 105º to the left and right sides	Pass
Upward	Minimum of 25º from the reference plan	Pass
Downward	Minimum of 45º from the basic plan	Pass

EQUIPMENT INFORMATION

DROP SYSTEM: CADEX Triaxial Impact Machine - Monorail
SOFTWARE: CADEX Impact Control Software

ITEM	MODEL	S/N
Test Computer	HP OptiPlex 5040	9HRYJG2
Data Acquisition Board	CADEX	13EC16A
Time Gate	CADEX	HVTG120120810-1
Control Center System	CADEX	CCS120120810-1

HEADFORMS

ITEM	HEADFORM	MODEL	ASSEMBLY WT., GRAMS
Headform	Full Headform	EN960 495 (A)	3167
Headform	Full Headform	EN960 535 (E)	4144
Headform	Full Headform	EN960 575 (J)	4741
Headform	Full Headform	EN960 605 (M)	5600
Headform	Full Headform	EN960 625 (O)	6175

IMPACT MEASURING SENSORS

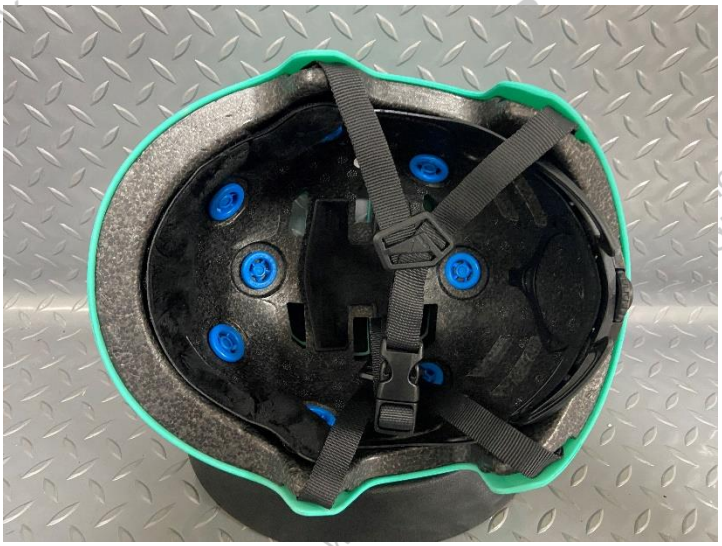
ITEM	TYPE	MODEL	S/N
Tri-axial Accelerometer	Axis X (10.02 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Y (10.01 mV/g)	PCB 356B21	LW345303
Tri-axial Accelerometer	Axis Z (10.04 mV/g)	PCB 356B21	LW345303

CONDITIONING EQUIPMENT

ITEM	MANUFACTURE	MODEL	S/N
Oven	BOXUN	92*9240MBE	8285
Oven	/	DHG-9426	1503338018
Oven	KENTON	KH-120A	2201-020
Freezer	Haier	DW-25W300	BE062100N00B29578VMO
Freezer	Haier	DW-50W225	F8LMJ
UV Ageing Chamber	HOTOTECH	HT-6014	12099
Hygrothermograph	Anymetre	TH-602F	3238

904.14204.014 – LT2323-MTB URBAN 2.0 (Green)

904.14204.014 – LT2323-MTB URBAN 2.0 (Green)



904.14204.014 – LT2323-MTB URBAN 2.0 (Green)

904.14204.014 – LT2323-MTB URBAN 2.0 (Green) – Labels

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7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

**********END OF REPORT**********