Declaration of Conformity

In Accordance with ANSI/ISEA 125-2014 and ANSI/ASSP Z359.7-2019

Declaration #: DOC-UFC408120
Declaration Date: 09/05/2020

Item #: UFC408120

Description: KStrong® Large Steel Carabiner 2" Gate Opening (ANSI)

Brand Name: KStrong

Manufacturer: KStrong

Address: 18505 Intercontinental Crossing, Houston, TX 77073

Additional Items Conforming Under this Declaration (If Applicable):

KStrong declares that the product(s) listed above is in conformity with the requirements of the following performance standard(s):

ANSI Z359.12-2009

Conformity Assessment Method in accordance with ANSI/ISEA 125-2014

- ○ **Level 1:** KStrong Lab Outside the Scope of ISO/IEC Standard 17025:2017
- ○ **Level 2:** KStrong Lab Within the Scope of ISO/IEC Standard 17025:2017
- ● **Level 3:** Independent 3rd Party Lab accredited to ISO/IEC Standard 17025:2017

Supporting Documentation: KS-Test-UFC408120.pdf

This Certificate is a guarantee that the above standard(s) was met by the requirements of such standard. Testing was performed under normal operation mode. The results of testing apply only to the particular sample tested and the specific test carried out. This Certificate is only issued for products which have passed the testing requirements of listed standard(s).

Authorized Signature:

Chad McBride
Chief Operating Officer - KStrong

ISO 17025 Accredited Test Laboratory

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Test Report

Personal Fall Arrest Equipment
ANSI Z359.12-2009 : Hardware

Report no: 2.19.08.32

Client: KSTRONG LLC
17330 Preston Road
#200 D Dallas
TX 7525
U.S.A

Manufacturer: KSTRONG LLC

Client order: T/0289 (15 March 2016)
T/0609 (22 July 2019)

Model: UFC408120

Dates of tests: 12 July 2016 to 12 September 2016, and 5 September 2019

Signed: 

Issued: 5 September 2019

Steven Sum, Laboratory Manager

Conditions

This report may be reproduced and distributed to your clients, provided that it is reproduced and distributed in full.

Specimens will be disposed of four weeks from the date of this report, unless otherwise instructed.

Opinions, comments and interpretations expressed in this report are shown in italics.

Copies of INSPEC interpretations referenced in this report are available upon request.

Tests marked ☒ are not included in our ANAB Scope of Accreditation.

This report has been provided in accordance with our standard Terms of Business, which can be viewed at, and printed from:

http://inspec-international.com/ToB.pdf

If you have difficulty accessing the Terms of Business, you may contact us for a copy.

Summary of assessment*

Clause	Requirement	Assessment (See Key)
3.1.1.1	Surface finish	Pass
3.1.1.2	New and unused	Pass
3.1.1.3	Carabiners & snaphooks	Pass
3.1.1.4	D, O and oval rings	
3.1.1.5	Buckles and adjusters	
3.1.1.6	Proof load testing	
3.1.1.7	Drop test	Pass
5.1 / 5.2	Marking	Ltd
5.3	Instructions	Pass

Key

	Shading shows the clauses requested. Any other clauses were not requested.
Pass	Requirement satisfied.
Ltd	Testing requested was insufficient completely to verify compliance with the clause. Refer to the "Result details" section for more information.
Fail	Requirement not satisfied. Refer to the "Result details" section for more information.
NAs	Assessment not carried out.
NAp	Requirement not applicable.
NT	Requested but not tested due to early termination following failure.

* Assessment relates only to those specimens which were tested and are the subject of this report.

Submission details

Product	Quantity	Date received	INSPEC specimen no. (2D104+)
Carabiner, model UFC408120	18	11 July 2016	01 to 18

Procedures

The specimens detailed within the submissions above were used for the tests covered by this report.

Testing was performed in accordance with ANSI Z359.12-2009 unless otherwise specified below. Reference should be made to the standard when reading this report.

Unless stated otherwise, specimens were tested in the condition as received by INSPEC.

Testing was performed at INSPEC's laboratory in Kunshan, China.

5 Labels were provided electronically and used for marking assessment. User Instructions were provided electronically and used for assessment.

Result details

3.1 Component and Element Requirements

3.1.1 Connector (Hardware) Components and Elements

3.1.1.1 Surface Finish of Hardware

Specimens 2D10401, 2D10402 and 2D10403 were assessed.

a) The finishes of the specimens were clean and free of scale, rust and deposits of foreign matter. Pass

b) Following the salt spray test, there were no evidence of either, red rust visible to the unaided eye, or corrosion of the base metal of the specimens. Pass

c) All surfaces of the specimens, which may come in contact with tearable materials, were free of burrs, pits, sharp edges and rough surfaces. Pass

3.1.1.2 Condition of Hardware

All specimens were assessed as new and unused when received. Pass

3.1.1.3 Snaphooks and Carabiners

Specimens 2D10404 to 2D10415 were assessed.

a) The connector incorporated a self-closing gate. Pass

The gate locked automatically when the gate closed. Pass

The connector was capable of being opened only by at least two consecutive, deliberate actions. Pass

b) When tested along the major axis, specimens 2D10404, 2D10405 and 2D10406 withstood the 5,000 pounds force for 1 minute without breaking and without distortion sufficient to release the gate. Pass

c) During the gate face test, specimens 2D10410, 2D10411 and 2D10412 withstood the 3,600 pounds force for 1 minute and the gate did not separate from the nose. Pass

d) During the gate side test, specimens 2D10413, 2D10414 and 2D10415 withstood the 3,600 pounds force for 1 minute and the gate did not separate from the nose. Pass

e) When tested along the minor axis, specimens 2D10407, 2D10408 and 2D10409 withstood the 3,600 pounds force for 1 minute without breaking and without distortion sufficient to release the gate. Pass

3.1.1.7 Dynamic drop test

When tested to the dynamic drop test, following abrasion and cold conditioning, specimens 2D10416, 2D10417 and 2D10418 withstood the drop without breaking and without permanent deformation sufficient to release the gate. Pass

5 Marking and instructions

5.1 General Marking Requirements

5.1.1 Markings shall be in English. Pass

5.1.2 No assessment was made as to whether or not the legibility and attachment of required markings shall endure for the life of the component being marked. NAs

Labels were provided electronically and use for marking assessment.

5.1.3 Any restrictions on the use of such connectors (hardware) shall be marked on the connectors (hardware) or component, subsystem and systems of which they are an integral part. *[No restrictions were listed.]* NAp

5.2 Specific Marking Requirements

5.2.1 Connectors. Connectors shall be marked to identify the following:

· year of manufacture; Pass

· manufacturer's identification; [model #] Pass

· markings for connectors shall be sufficient to provide traceability; [PT] Pass

· load rating for the major axis of the connector stamped or otherwise permanently marked on the device; "5000 lbf" Pass

· load rating for gate stamped or otherwise permanently marked on the gate mechanism; "3600 lbf" Pass

· for connectors that are non-integral, include the standard number, "Z359.12". Pass

5.3 Specific Instruction Requirements

5.3.1 Connectors. Instructions for connector components shall include:

· the material used in the connector construction; [alloy steel] Pass

· the size of the connector and dimensions affecting its compatibility with objects to which it may be connected; Pass

· the need to make only compatible connections and limitations of compatibility; Pass

· proper method of coupling the connector and checking that it is closed and locked; Pass

· the minimum strength of the connector body when loaded in the direction set forth in the applicable sections of this standard; Pass

· the minimum strength of carabiner and snaphook gates when loaded in the directions set forth in 3.1.1.3; Pass

Estimates of the uncertainty of measurement

Clause	Test	Uncertainty
3.1.1.1	Surface finish	*
3.1.1.2	New and unused	-
3.1.1.3	Carabiners & snaphooks	Tensile test ±1.4%
		Gate resistance ±1.4%
3.1.1.4	D, O and oval rings	±0.4%
3.1.1.5	Buckles and adjusters	±0.4%
3.1.1.6	Proof load testing	NAs
3.1.1.7	Drop test	*
5.1 / 5.2	Marking	-
5.3 / 5.4	Information	-

* The acceptance criterion for this test is a straightforward “Pass/Fail”, rather than a numerical value. Consequently, as there is no value to be reported, uncertainty has not been reported either.

Values expressed as a percentage (%) are relative.

It should be noted that the above values have not been taken into account when making assessment to the pass/fail criteria.

ANNEX

This Annex comprises one section.

1. Photographs of the product tested. (1 page)

KSTRONG LLC – Carabiner, model UFC408120