財團法人金屬工業研究發展中心
機械測試實驗室
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Metal Industries Research & Development Centre
Mechanical Testing Laboratory
No.25, 37th Road, Industrial Park, Taichung City 40768, Taiwan (R.O.C.)

Testing Laboratory
0099

Date：2022/09/22

Accreditation No.：111TD0922-270-C01

Certificate of Conformance for Freight Container Mechanical Seal Testing
Seal Classification: High security seal

Customer：
Mega Fortris (Malaysia) Sdn. Bhd.
29, Jalan Anggerik Mokara 31/47, Kota Kemuning, Seksyen 31, 40460 Shan Alam, Selangor, Malaysia

Name of Article：High Security Cable Seal
Type：MEGA CABLE LOCK ZINC 350 (MCLZ350)
Serial No.：T22350-0001~T22350-0025
Specification No.：ISO 17712:2013(E)
Test Dates：2022/09/19~2022/09/22

MIRDC , certifies that 25 samples, 5 for each test, of the seal referenced above were subjected to the following tests.

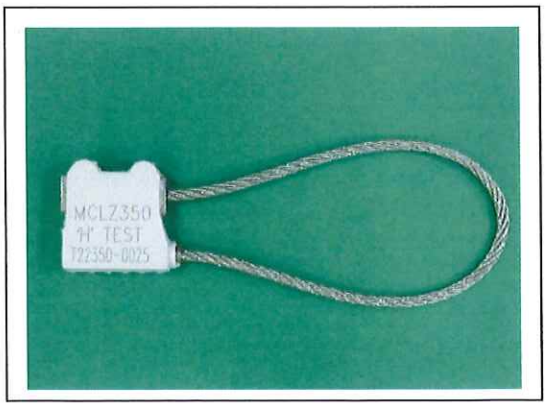
Test Item	Section Number	Classification
Tensile Test	5.2	High security seal (H)
Shear Test	5.3	High security seal (H)
Bending Test	5.4	High security seal (H)
Impact Test room temp	5.5	High security seal (H)
Impact Test reduced temp	5.5	High security seal (H)

Remarks：As per ISO17712:2013(E) Clause 5.1.2 "Testing is to be done once every two years". Therefore, this report expires two years from the test completion date.

Results：The above listed tests were completed with no discrepancies noted. Refer to test report number L0830270-T01 for complete details.

The test results contained herein pertain only to the specimens listed in this report. This report shall not be reproduced, except in full, without the written approval of MIRDC

Approved Signatory：CHIANG, Ching-Liu	Chiang Ching Liu
Engineer：SU, Yuan-Da	Su. Yuan-Da



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試驗報告 TEST REPORT

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TEST REPORT NO. : L0830270-T01　　Page 1 of 9

Customer：
Mega Fortris (Malaysia) Sdn. Bhd.
29, Jalan Anggerik Mokara 31/47, Kota Kemuning, Seksyen 31, 40460 Shan Alam, Selangor, Malaysia

SUBJECT：Freight containers Mechanical seals classification Testing
Name of Article：High Security Cable Seal
Type：MEGA CABLE LOCK ZINC 350 (MCLZ350)
Received Date：2022/08/30
Test Dates：2022/09/19~2022/09/22
Date Issued：2022/09/22

CHIANG, Ching-Liu
報告簽署人 (Report Authorized Person)

SU, Yuan-Da
檢驗員 (Inspector)

Note：
(1) The operation and testing of MIRDC laboratory are in conformity to the requirements of ISO/IEC 17025：2017
(Taiwan Accreditation Foundation , Accreditation No.：0099)
(2) This report is responsible for designated samples only.
(3) Reproduction of all or parts this report without a written approval is strictly prohibited.
(4) Decision rules of conformance statement of this test report, do not consider uncertainty of measurement.

1. ABSTRACT

Customer：
Mega Fortris (Malaysia) Sdn. Bhd.
29, Jalan Anggerik Mokara 31/47, Kota Kemuning, Seksyen 31, 40460 Shan Alam, Selangor, Malaysia

Name of Article：High Security Cable Seal

Type：MEGA CABLE LOCK ZINC 350 (MCLZ350)

Serial No.：T22350-0001~T22350-0025

Quantity Tested：25

Specification No.：ISO 17712:2013(E)

Test Item	Section Number	Results
Tensile Test	5.2	See Page 3
Shear Test	5.3	See Page 5
Bending Test	5.4	See Page 6
Impact Test room temp	5.5	See Page 7
Impact Test reduced temp	5.5	See Page 7

2. Tensile Test ：

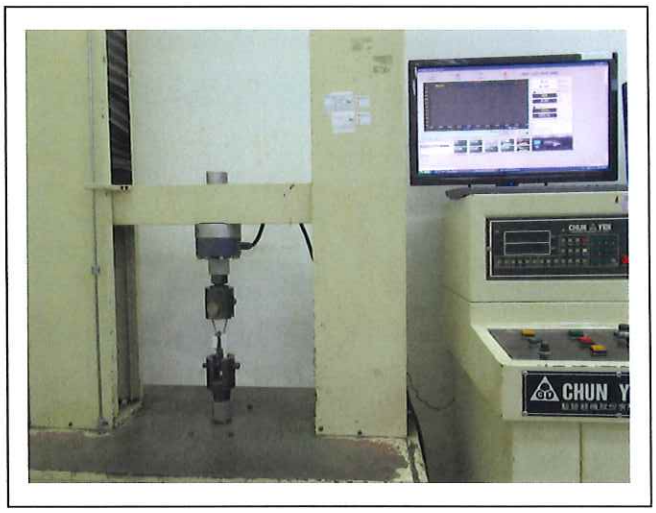
Testing Instrument：Universal Testing Machine (No.TG0103)
Ambient Temp.：18℃；57% R.H.
Specification No.：ISO 17712:2013(E)
Result：

Tensile Test Section 5.2

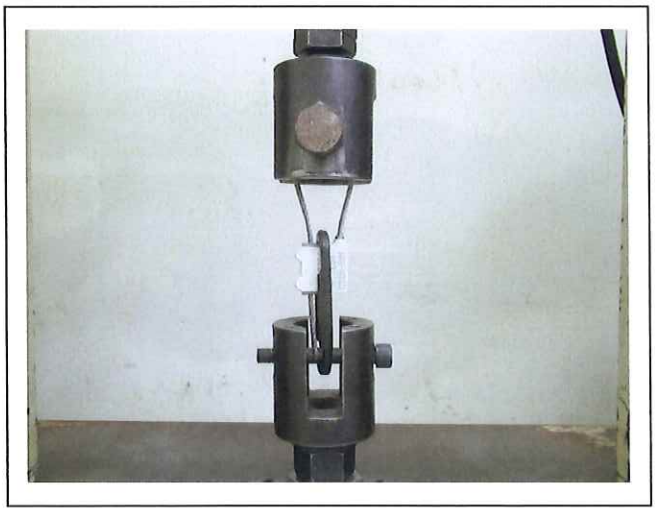
The seal was gripped in a tensile machine and a pull force applied.

Specimen No.	Requirement Load to failure	Result kN	Seal classification
T22350-0001	10.0 kN：High security seal	11.0	High security seal (H)
T22350-0002	2.27 kN：Security seal	10.2	High security seal (H)
T22350-0003	< 2.27 kN：Indicative seal	11.2	High security seal (H)
T22350-0004		10.4	High security seal (H)
T22350-0005		11.1	High security seal (H)

Universal Testing Machine



Tensile Set up



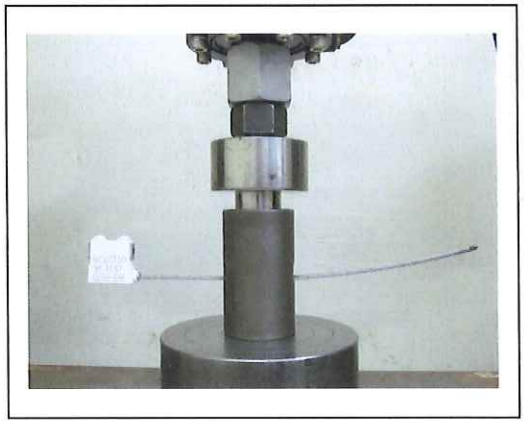
3. Shear Test
Testing Instrument：Universal Testing Machine (No.TG0103)
Ambient Temp.：18℃ ；57% R.H.
Specification No.：ISO 17712:2013(E)
Result：

Shear Test Section 5.3

The seal was fixed in a universal testing machine to withstand cutting with shearing blades and a compressive load applied slowly until the seal is severed.

Specimen No.	Requirement Load to failure	Result kN	Seal classification
T22350-0006	3.336 kN：High security seal	6.626	High security seal (H)
T22350-0007	2.224 kN：Security seal	6.635	High security seal (H)
T22350-0008	<2.224 kN：Indicative seal	6.341	High security seal (H)
T22350-0009		6.492	High security seal (H)
T22350-0010		6.552	High security seal (H)

Shear Set up



SAFETY PRECAUTIONS - Do not exceed a shear force greater than 8900N(2001lbf) .If the specimen has not failed at that force, halt the test and unload the test equipment. Record a shear force of 8896N (2000 lbf).Sudden and violent rupture of the test specimen can endanger personnel, equipment and property.

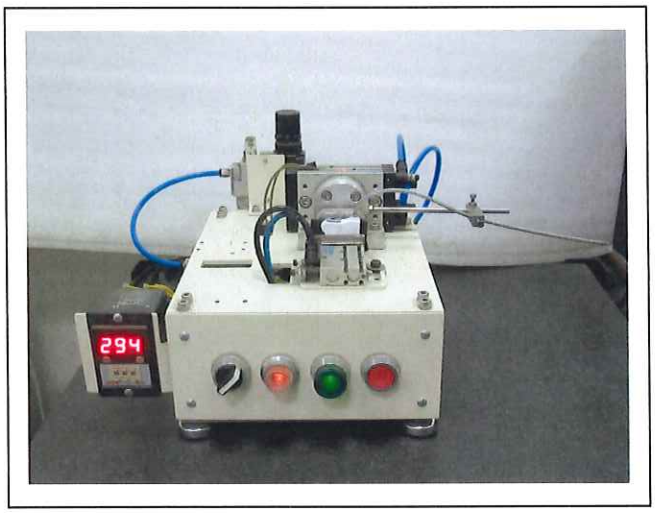
4. Bending Test

Testing Instrument：Bending Tester
Ambient Temp.：18℃；57% R.H.
Specification No.：ISO 17712:2013(E)
Result：

Bending Test Section 5.4

Fix the locking end and flex the material adjacent to this fixed end repeatedly through an arc of 180° until failure

Specimen No.	Requirement Cycles to failure	Result Cycles	Seal classification
T22350-0011	501：High security seal	>501	High security seal (H)
T22350-0012	251：Security seal	>501	High security seal (H)
T22350-0013	<251：Indicative seal	>501	High security seal (H)
T22350-0014		>501	High security seal (H)
T22350-0015		>501	High security seal (H)



Bend Set up

5. Impact Test

Testing Instrument：
5.1. Impact Tester
5.2. Programmable Low Temp. Tester (No.SG5501)
Specification No.：ISO 17712:2013(E)

Impact Test Section 5.5

The impact test is performed at 18 degrees C and minus 27 degrees C of temperature. The impact load is applied at the locking mechanism of the seal in the direction opposite the direction used in locking the seal.

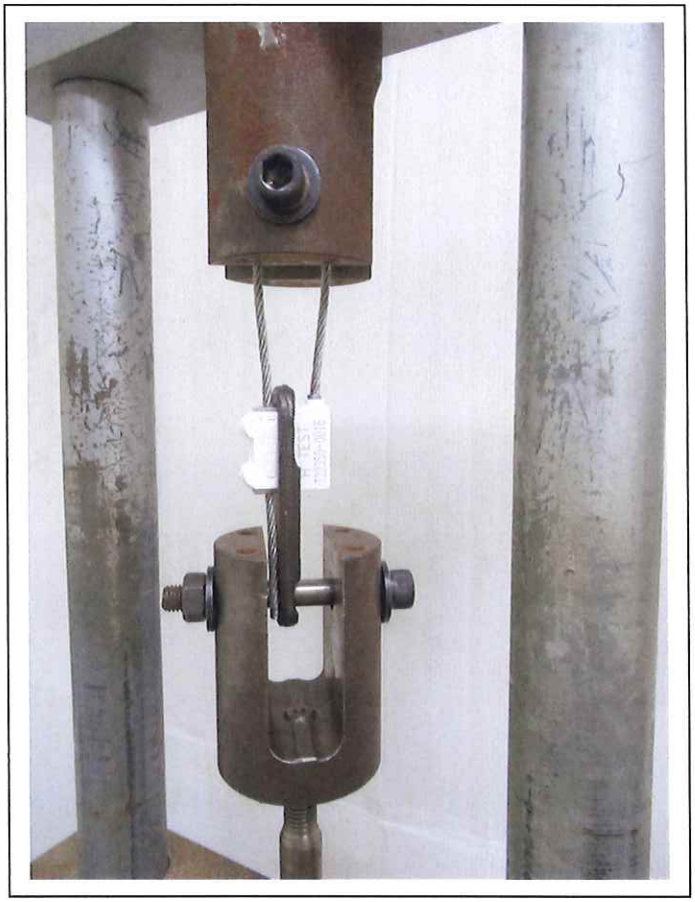
Result：

Impact Test at 18 ℃

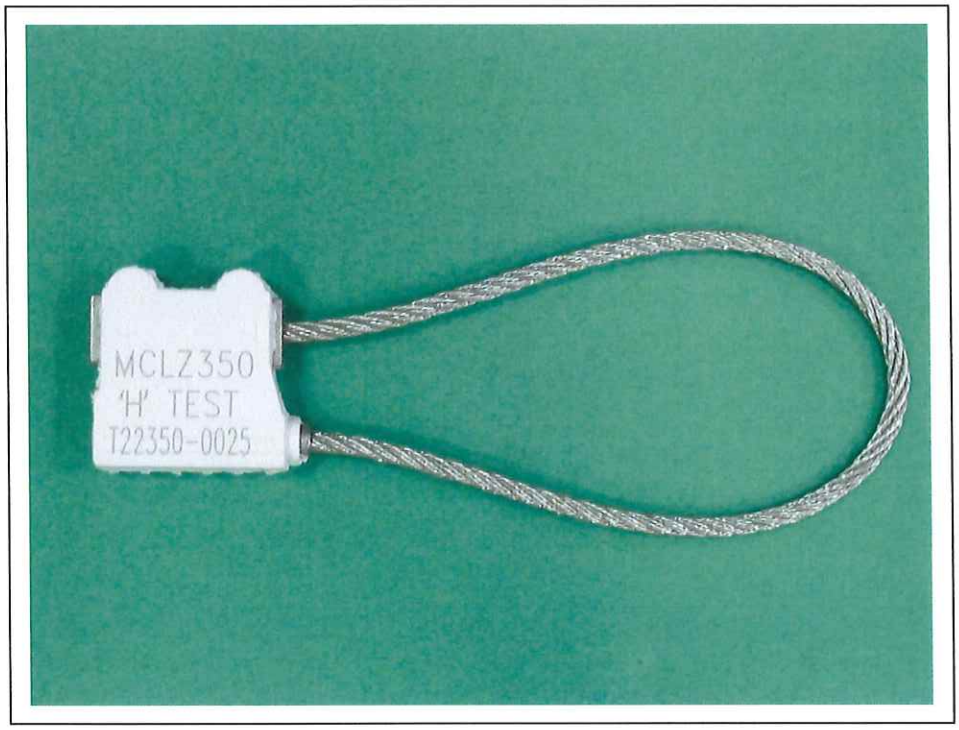
Specimen No.	Requirement	Result Joule			Seal classification
		13.56	27.12	40.68	
T22350-0016	40.68J：High security seal	Pass	Pass	Pass	High security seal (H)
T22350-0017	27.12J：Security seal	Pass	Pass	Pass	High security seal (H)
T22350-0018	<27.12J：Indicative seal	Pass	Pass	Pass	High security seal (H)
T22350-0019	**5 impacts at each load**	Pass	Pass	Pass	High security seal (H)
T22350-0020		Pass	Pass	Pass	High security seal (H)

Impact Test at -27 ℃

Specimen No.	Requirement	Result Joule			Seal classification
		13.56	27.12	40.68	
T22350-0021	40.68J：High security seal	Pass	Pass	Pass	High security seal (H)
T22350-0022	27.12J：Security seal	Pass	Pass	Pass	High security seal (H)
T22350-0023	<27.12J：Indicative seal	Pass	Pass	Pass	High security seal (H)
T22350-0024	**5 impacts at each load**	Pass	Pass	Pass	High security seal (H)
T22350-0025		Pass	Pass	Pass	High security seal (H)



Impact Set up



Name of Article：High Security Cable Seal
Type：MEGA CABLE LOCK ZINC 350 (MCLZ350)
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