Element Materials Technology
56 Nursery Street
Sheffield
South Yorkshire
S3 8GP UK
info.sheffield@element.com
element.com

P: +44 (0) 114 272 6581
F: +44 (0) 114 272 3248
Bank HSBC
Acct 44517393
Sort Code 40-38-04
V.A.T. No. 172 8037 62
Company Reg. No. 76383

PO Number: PO10031

Test Report: No. 16030366

Customer: VR Access Solutions Limited, 1 Swan Courtyard, Charles Edward Road, Birmingham, B26 1BU

Element Materials Technology (Sheffield) were asked by VR Access Solutions Limited to perform the analysis reported below:

Material Information

Test Date: 01/04/2016

Description of Sample:	3.5M Galvanised Steel Ladder
Material Specification:	Not Given
-	
-	
-	
-	
-	
-	

Introduction

Tested in accordance with: BS EN 131-2: 2010 + A1: 2012

The following report details tests applied to one Galvanised Steel Ladder (3.5m length) tested in accordance with relevant clauses of BSEN 131-2: 2010 + A1: 2012.

Results

Section 5.2 Strength Test of Stiles

Pre Load	Test Load	Deflection Measurement taken after 1 minute (mm) fmax = 0.001 x l	Pass / Fail
500N	1100N	1mm	Pass

Section 5.3 Bending Test of Stiles

Pre Load	Test Load	Deflection Measurement taken after 1 minute (mm) fmax = 5 x l2 x 10-6	Pass / Fail
100N	750N	15mm	Pass

Section 5.4 Lateral Deflection Test of Ladder

Pre Load	Test Load	Deflection Measurement taken after 1 minute (mm) fmax = 0.005 x l	Pass / Fail
100N	250N	3mm	Pass

Section 5.5 Bottom Stile Ends Test

Pre Load	Test Load	Deflection Measurement taken after 1 minute (mm) fmax = 2mm	Pass / Fail
N/A	1100N	0mm (Top Stile end)	Pass
N/A	1100N	0mm (Bottom Stile end)	Pass

Section 5.6.2 Vertical Load on Rung

Pre Load	Test Load	Deflection Measurement taken after 1 minute (mm)	Deflection (%) Max 0.5%	Pass / Fail
200N	2600N	0mm	0.00%	Pass

Section 5.7 Torsion Test on Rung

Pre Load	Test Load	Deflection Measurement (°) Max 1°	Pass / Fail
N/A	50Nm	Zero	Pass

Section 5.11.1 Feet Pull Test

Pre Load	Test Load	Separation Measurement (mm) Max 4mm	Pass / Fail
N/A	150N	Zero	Pass

Section 5.15 Torsion on Ladder Length

Direction	Pre Load	Test Load	Deflection Measurement (°) Max 18°	Pass / Fail
Clockwise	65Nm	130Nm	1°	Pass
Anti clockwise	65Nm	130Nm	1°	Pass

Conclusion: From the results above the ladder has Passed the requirements of BS EN 131-2: 2010 + A1: 2012

Issue Date: 22 April 2016

Authorised Signatory

Signature:  Name: **Ben Bullen** Position: **Manager Mechanical Testing**

NB: All tests marked with a * are not on our UKAS schedule of accreditation