Forgefix Ltd
Botany Business Park
Macclesfield Road
Whaley Bridge
SK23 7DQ

You're never in a fix with FORGEFIX®

DECLARATION OF PERFORMANCE

- TechFast Sheet to Steel Roofing & Cladding Screw
  - Gauges: 5.5mm, 6.3mm
  - Hex Head
  - Partial thread
  - Material: Carbon Steel
  - Coating: Ruspert coating, Elementech corrosion resistance
- TechFast screws are developed specifically for the roofing and cladding sector
- Manufacturer: Forgefix Ltd.,
  Botany Business Park,
  Macclesfield Road,
  Whaley Bridge,
  SK23 7DQ.
- Tested to EN 14566:2008+A1:2009, by: Leaderwing Hardware Industrial Co., Ltd, 13F-2, No. 16, He' ai St., Rende Dist., Tainan City 717, Taiwan

  Testing Laboratory 13F-2, No. 16, He' ai St., Rende Dist., Tainan City 717, Taiwan

  Report Number: LDW-CE18001 dated 16/03/2018
- Declared Performance for essential characteristics to EN 14566:2008+A1:2009
- System of AVCP: System 4
- The performance of the mentioned products is in conformity with the declared performance given below

Sampling Method

50 new fasteners are random sampled for each test item according to EN 14566 and Annex B.

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FLEXURAL STRENGTH TEST

- Principle and Criteria
    - When tested no fastener shall show signs of breakage or cracking.

- Test Results:

Size	Sample Screw No.	Breakage or Cracking
5.5mm	1-50	Pass
6.3mm	1-50	Pass

Summary: Pass: 50 pcs Fail: 0 pcs

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WITHDRAWAL TEST

- Principal and Criteria
  - The diameter and pitch of the threaded portion shall be capable of providing sufficient withdrawal force to allow the screw to achieve a minimum value of 450N. No more than five screws shall fail.
  - The force to withdraw a fastener from a piece of timber or metal section shall be measured.
- Test Results:
  - **5.5mm**

No.	Withdrawal Force
1	634N
2	673N
3	634N
4	659N
5	638N
6	640N
7	645N
8	643N
9	639N
10	641N
11	638N
12	650N
13	637N

No.	Withdrawal Force
14	637N
15	638N
16	668N
17	667N
18	665N
19	661N
20	638N
21	640N
22	658N
23	660N
24	671N
25	675N
26	639N

No.	Withdrawal Force
27	640N
28	670N
29	668N
30	669N
31	634N
32	633N
33	625N
34	631N
35	659N
36	680N
37	670N
38	633N
39	631N

No	Withdrawal Force
40	632N
41	635N
42	650N
43	655N
44	666N
45	657N
46	658N
47	667N
48	668N
49	662N
50	673N

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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WITHDRAWAL TEST (CONT.)

- Test Results:
  - **6.3mm**

No.	Withdrawal Force
1	987N
2	992N
3	1010N
4	1025N
5	999N
6	975N
7	983N
8	994N
9	1011N
10	968N
11	992N
12	1025N
13	975N

No.	Withdrawal Force
14	986N
15	995N
16	975N
17	966N
18	986N
19	971N
20	992N
21	975N
22	963N
23	1019N
24	997N
25	1022N
26	1001N

No.	Withdrawal Force
27	988N
28	965N
29	985N
30	1014N
31	974N
32	961N
33	999N
34	972N
35	986N
36	966N
37	977N
38	985N
39	996N

No	Withdrawal Force
40	1002N
41	997N
42	961N
43	955N
44	979N
45	988N
46	963N
47	953N
48	987N
49	964N
50	1010N

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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POINT TEST (DRILLING PERFORMANCE TEST)

- Principle and Criteria
  - For self-drilling screws (type D), the points shall be designed with suitable thread to be capable of penetrating (2 ± 0,09) mm cold rolled galvanized steel sheet to EN 10327 when screws are tested. No more than 5 screws shall exceed a penetration time of 4s.

- Test Results:
  - **5.5mm**

No.	Drilling Time
1	2.32s
2	2.37s
3	2.11s
4	2.15s
5	2.18s
6	2.23s
7	2.25s
8	2.41s
9	2.11s
10	2.52s
11	2.21s
12	2.34s
13	2.51s

No.	Drilling Time
14	2.32s
15	2.58s
16	2.57s
17	2.45s
18	2.23s
19	2.15s
20	2.14s
21	2.13s
22	2.25s
23	2.57s
24	2.28s
25	2.45s
26	2.61s

No.	Drilling Time
27	2.49s
28	2.18s
29	2.31s
30	2.32s
31	2.44s
32	2.36s
33	2.18s
34	2.59s
35	2.41s
36	2.40s
37	2.29s
38	2.51s
39	2.45

No	Drilling Time
40	2.56s
41	2.17s
42	2.31s
43	2.24s
44	2.25s
45	2.51s
46	2.61s
47	2.41s
48	2.15s
49	2.58s
50	2.29s

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result:** PASS

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POINT TEST (DRILLING PERFORMANCE TEST) (CONT.)

- Test Results:
  - **6.3mm**

No.	Drilling Time
1	1.94
2	2.16
3	2.08
4	2.16
5	1.96
6	1.97
7	2.01
8	2.02
9	1.99
10	2.16
11	2.15
12	2.14
13	2.12

No.	Drilling Time
14	1.98
15	1.97
16	1.97
17	2.01
18	2.00
19	2.15
20	2.11
21	2.13
22	2.02
23	1.99
24	2.08
25	2.15
26	2.00

No.	Drilling Time
27	2.11
28	2.05
29	2.08
30	2.14
31	2.09
32	2.98
33	2.03
34	2.07
35	2.15
36	2.10
37	1.97
38	1.98
39	1.94

No	Drilling Time
40	2.14
41	2.11
42	2.06
43	1.98
44	2.05
45	2.16
46	1.95
47	1.99
48	1.94
49	2.15
50	2.01

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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LENGTH TEST (DIMENSION MEASUREMENT)

- Principle and Criteria
  - The nominal length and tolerances shall be stated by the producer in its technical literature. When measured, no more than five screws shall be outside the stated tolerances.

- Test Results:
  - **5.5 x 105mm**

No.	Length
1	105.68mm
2	105.12mm
3	105.78mm
4	105.10mm
5	105.20mm
6	104.98mm
7	104.99mm
8	105.78mm
9	104.99mm
10	104.88mm
11	105.78mm
12	105.69mm
13	104.99mm

No.	Length
14	104.99mm
15	105.98mm
16	105.99mm
17	105.88mm
18	105.78mm
19	105.55mm
20	105.82mm
21	105.38mm
22	105.22mm
23	105.89mm
24	105.32mm
25	105.78mm
26	104.98mm

No.	Length
27	104.99mm
28	105.12mm
29	105.55mm
30	105.12mm
31	105.89m
32	105.78mm
33	105.88mm
34	105.78mm
35	105.55mm
36	105.79mm
37	105.46mm
38	105.89mm
39	105.78mm

No	Length
40	105.45mm
41	105.46mm
42	105.78mm
43	105.46mm
44	105.33mm
45	105.21mm
46	105.81mm
47	105.01mm
48	105.03mm
49	105.05mm
50	105.55mm

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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LENGTH TEST (DIMENSION MEASUREMENT) (CONT.)

- Test Results:
  - **6.3 x 110mm**

No.	Length
1	109.26mm
2	111.00mm
3	108.79mm
4	109.52mm
5	110.52mm
6	111.03mm
7	110.55mm
8	109.55mm
9	109.57mm
10	109.55mm
11	110.25mm
12	110.96mm
13	111.20mm

No.	Length
14	110.55mm
15	109.56mm
16	109.88mm
17	109.63mm
18	108.99mm
19	110.58mm
20	111.22mm
21	110.97mm
22	110.99mm
23	111.00mm
24	109.54mm
25	109.64mm
26	110.08mm

No.	Length
27	110.52mm
28	110.88mm
29	110.95mm
30	110.64mm
31	109.99mm
32	109.54mm
33	109.63mm
34	109.45mm
35	110.25mm
36	110.98mm
37	110.45mm
38	110.85mm
39	109.99mm

No	Length
40	109.52mm
41	108.93mm
42	110.45m
43	111.02mm
44	110.54mm
45	110.55mm
46	110.58mm
47	110.45mm
48	110.33mm
49	110.54mm
50	110.75mm

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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HARDNESS TEST

- Principle and Criteria
  - The surface of the screws shall be case hardened to a minimum depth of 0,05mm with a case hardness of 55 HRC to Rockwell cone. No more than five screws shall fail.

- Test Results:
  - **5.5mm**

No.	Hardness
1	58.4 HRC
2	58.7 HRC
3	58.2 HRC
4	58.5 HRC
5	57.8 HRC
6	56.6 HRC
7	58.8 HRC
8	55.3 HRC
9	57.2 HRC
10	56.9 HRC
11	57.6 HRC
12	56.2 HRC
13	56.5 HRC

No.	Hardness
14	58.9 HRC
15	57.2 HRC
16	59.9 HRC
17	58.7 HRC
18	58.6 HRC
19	57.6 HRC
20	56.8 HRC
21	57.1 HRC
22	56.8 HRC
23	58.8 HRC
24	56.9 HRC
25	58.8 HRC
26	58.7 HRC

No.	Hardness
27	58.6 HRC
28	58.5 HRC
29	58.0 HRC
30	57.1 HRC
31	58.0 HRC
32	57.2 HRC
33	56.8 HRC
34	58.7 HRC
35	57.7 HRC
36	56.6 HRC
37	56.9 HRC
38	57.1 HRC
39	56.2 HRC

No	Hardness
40	58.0 HRC
41	57.9 HRC
42	57.9 HRC
43	58.8 HRC
44	56.8 HRC
45	57.0 HRC
46	56.6 HRC
47	57.1 HRC
48	57.6 HRC
49	57.1 HRC
50	57.9 HRC

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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HARDNESS TEST (CONT.)

- Test Results:
  - **6.3mm**

No.	Hardness
1	58.1 HRC
2	60.1 HRC
3	59.2 HRC
4	59.3 HRC
5	61.3 HRC
6	59.2 HRC
7	61.2 HRC
8	58.7 HRC
9	58.9 HRC
10	58.2 HRC
11	59.1 HRC
12	60.1 HRC
13	60.9 HRC

No.	Hardness
14	60.8 HRC
15	58.9 HRC
16	58.7 HRC
17	57.8 HRC
18	56.8 HRC
19	57.9 HRC
20	60.2 HRC
21	58.9 HRC
22	56.0 HRC
23	56.2 HRC
24	58.1 HRC
25	59.2 HRC
26	58.1 HRC

No.	Hardness
27	60.2 HRC
28	58.3 HRC
29	57.3 HRC
30	61.2 HRC
31	60.5 HRC
32	58.8 HRC
33	59.4 HRC
34	58.4 HRC
35	57.8 HRC
36	58.8 HRC
37	58.9 HRC
38	59.6 HRC
39	59.8 HRC

No	Hardness
40	61.2 HRC
41	57.8 HRC
42	61.2 HRC
43	61.3 HRC
44	60.8 HRC
45	58.9 HRC
46	59.9 HRC
47	60.0 HRC
48	58.9 HRC
49	56.8 HRC
50	57.7 HRC

Summary: Pass: 50 pcs Fail: 0 pcs **Test Result**: PASS

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This declaration of performance is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by:

Anthony Armitt, Commercial Director of Forgefix Ltd.

Signature: AArmitt Date: 04/01/2019

At our office in Botany Business Park, Macclesfield Road, Whaley Bridge, Sk23 7DQ