WST 4.5 WOODMASTER® WOODSCREW 4.5mm ØD[1]
DECLARATION OF PERFORMANCE
REV. A

DoP No.: EVO-14592-0010-A

Date of issue: 30th September 2026

[1] ØD = nominal diameter of the product,

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DECLARATION OF PERFORMANCE
No. EVO-14592-0010 -A

1. UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE

WST4550,
WST4560,
WST4570,
WST4580.

The product-type is described in Table 01. All harmonised technical specification (hEN) clauses refer to those in EN 14592:2008+A1:2012 unless noted otherwise.

Table 01: Product-type description

Property	Declared value	hEN clause(s)
Fastener type	Screw (woodscrew), fully or partially threaded and Type 17	6.3.1
Head form and drive	Double countersunk head, hexalobular recess, six nibs under the head	Descriptive only
Parent material and specification	Carbon steel; SAE 1022; SWCH22A	6.3.2
Corrosion protection coating and coating type	Electroplated zinc with trivalent passivation; coating type 1	3.12; Table 4
Nominal diameter, d[2]	4.5 mm	5.3; 6.3.3
Length, l_{nom}[2]	50.0, 60.0, 70.0 and 80.0 mm	5.2; 6.3.3
Threaded length, l_g[2]	Fully threaded, ≤ 42.0mm and ≤ 52.0 mm	5.4; 6.3.3
Inner thread diameter, d_1[2]	2.7 mm	6.3.3
Head diameter, d_h[2]	8.62 mm	6.3.3
Washer	Not applicable	Table ZA.1, note d

[2] Declared dimensions are based on five specimens measured by the Notified Laboratory (Test Report No. 30-18525/8/JP),

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2. INTENDED USE

Screws for structural timber products, for use in load-bearing timber structures, as set out in EN 14592:2008+A1:2012, Annex ZA, Tables ZA.1 and ZA.2.

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3. MANUFACTURER

Evolution Fasteners (UK) Ltd
Clyde Gateway Trade Park
Dalmarnock Road
Glasgow
G73 1AN
United Kingdom

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4. AUTHORISED REPRESENTATIVE

Authorised representatives established within the Union, each holding a mandate covering the tasks specified in Article 12(2) of Regulation (EU) No 305/2011:

Evolution Fasteners (IE) Ltd
Finglas Business Centre
Jamestown Road
Finglas
Dublin 11
Ireland

Evolution Fasteners (NL) B.V.
Pastoorslaan 57
2182 BW Hillegom
Netherlands

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5. SYSTEM OF AVCP

System 3, as set out in Annex V of Regulation (EU) No 305/2011, applicable to dowel-type timber fasteners for structural timber products under Commission Decision 97/176/EC as amended by Commission Decision 2001/596/EC (EN 14592:2008+A1:2012, Annex ZA, Table ZA.2).

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6(A). HARMONISED STANDARD

Harmonised standard:	EN 14592:2008+A1:2012, *Timber structures - Dowel-type fasteners - Requirements*.
Notified body:	Strojírenský zkušební ústav, s.p., Hudcova 424/56b, 621 00 Brno, Czech Republic (notified body No. 1015), acting as notified testing laboratory, performed the determination of the product-type on the basis of type testing (based on sampling carried out by the manufacturer) under System 3 and issued test report 30-18525/8/JP, Revision 0, dated 11 August 2026.

6(B). EUROPEAN ASSESSMENT DOCUMENT

Not applicable.

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7. DECLARED PERFORMANCES

The declared performances for the intended use given in section 2, covering the essential characteristics listed for screws in EN 14592:2008+A1:2012, Table ZA.1, are given in Table 02. All harmonised technical specification (hEN) clauses refer to those in EN 14592:2008+A1:2012 unless noted otherwise.

Table 02: Declared performances

Essential characteristic	Performance (value and unit)	hEN clause
Mechanical strength and stiffness		
Characteristic yield moment, $M_{y,k}$[3]	5,035 Nmm	6.3.4.1; 6.3.4.2
Characteristic withdrawal parameter, $f_{ax,k}$[4,5]	16.07[6] N/mm² 13.72[7] N/mm²	6.3.4.3
Characteristic head pull-through parameter, $f_{head,k}$[8,5]	23.25 N/mm²	6.3.4.4
Characteristic tensile capacity, $f_{tens,k}$[9]	6.27 kN	6.3.4.5
Characteristic torsional ratio, $f_{tor,k}$ / $R_{tor,k}$[10]	$f_{tor,k}$ = 4,440 Nmm $R_{tor,k}$ = 2,210 Nmm $f_{tor,k}$ / $R_{tor,k}$ = 2.01[11]	6.3.4.6
Durability		
Corrosion protection	Electroplated zinc with trivalent passivation, min. thickness 12 µm; Service Classes 1 and 2 according to EN 1995-1-1[12]	6.3.5; Annex A

Characteristic values are calculated from ten specimens per characteristic in accordance with EN 14358 (lognormal distribution). The declared performances apply only to the product-type described in Table 01.

[3] Determined by testing in accordance with EN 409:2009 on the threaded section, at a bend angle of 18° ($45/d^{0.7}$ with d = 4.5 mm). All specimens were bent to ($45/d^{0.7}$ + 10) degrees without fracture or other failure,
[4] Determined by testing in accordance with EN 1382:2018 in timber conditioned at 20 °C and 65 % relative humidity,
[5] Performed in timber of characteristic density ρ_k = 350 kg/m³,
[6] Screw axis perpendicular to grain,
[7] Screw axis parallel to grain,
[8] Determined by testing in accordance with EN 1383:2016 with a head-side member 20 mm thick, calculated with d_h = 8.62 mm,
[9] Determined in accordance with EN 1383:2016 with a steel plate replacing the head-side timber member; failure load reached within 10 s ± 5 s,
[10] $R_{tor,k}$ determined in accordance with EN 15737:2010 in spruce of density 450 kg/m³. $f_{tor,k}$ determined in accordance with EN ISO 10666:1999, 4.2.3,
[11] Requirement is ≥ 1.5,
[12] Pursuant to EN 1995-1-1,

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8. APPROPRIATE TECHNICAL DOCUMENTATION AND/OR SPECIFIC TECHNICAL DOCUMENTATION

Not applicable.

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9. AUTHORISATION STATEMENT

THE PERFORMANCE OF THE PRODUCT IDENTIFIED ABOVE IS IN CONFORMITY WITH THE SET OF DECLARED PERFORMANCES. THIS DECLARATION OF PERFORMANCE IS ISSUED, IN ACCORDANCE WITH REGULATION (EU) NO 305/2011, UNDER THE SOLE RESPONSIBILITY OF THE MANUFACTURER IDENTIFIED ABOVE.

Signed for and on behalf of the manufacturer by:



EUR ING Ryan Murphy (Chartered Engineer)
TECHNICAL DIRECTOR
At Glasgow, United Kingdom on 30th September 2026

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10. REVISION HISTORY

Table 03: Revision history			
Rev. No.	**Comment(s)**	**Auth'd**	**Date**
A	Original issue.	RM	30 Sept 26

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