

## Declaration of Properties

pov-HPL

1. Unique identification code of the product-type:

**HPL construction screw**



2. Type of the construction product:

**HPL construction screw**

- diameter  $\varnothing$  3,0; 3,5; 4,0; 4,5; 5,0; 6,0; 8,0; 10 mm
- head: countersunk; wafer
- thread: full or partial
- drive type: torx
- material: C10B21;
- length 30-400mm
- durability: service class 1 and 2

3. Intended use of construction product:

**Screw for load timber construction**

4. Producer:

**Hašpl a.s.**

Ke Koupališti 172  
549 32 Velké Poříčí

*IČO: 274 66 663*  
*DIČ: CZ274 66 663*

5. System of assessment and verification of constancy of performance of the construction product:

**System 3** acc (EU) 305/2011

6. European Assessment Document:  
**EAD 130118-01-0603 03\_2019**

European technical assessment:  
**ETA 20/0049**

Technical assessment body:  
**Technický a zkušební ústav stavební Praha, s.p.**

Notified body: **1020**

7. Declared performance:

HPL construction screw – plant 1														
Based characteristic	Ø3,0	Ø3,5	Ø4,0	Ø4,5	Ø5,0	Ø6,0	Ø8,0	Ø10,0	Harmonized standard / EAD					
$D$ (mm)	3,07	3,52	3,96	4,55	5,00	5,97	8,02	10,04	EN 14592+A1 2012					
$D_1$ (mm)	2,02	2,24	2,48	2,79	3,11	3,94	5,4	6,28						
$D_h^{countersunk}$ (mm)	6,02	6,78	7,78	9,01	9,79	11,6	14,76	17,49						
$D_h^{wafer}$ (mm)	NA	NA	NA	NA	11,68	14,73	20,68	24,25						
$D_s$ (mm)	2,22	2,45	2,75	3,14	3,42	4,24	5,84	6,97						
$p$ thread pitch (mm)	1,8	2,16	2,7	2,89	3,2	5,2	5,45	6,58						
Characteristic yield moment	threaded part	threaded part	threaded part	threaded part	smooth part	threaded part	smooth part	threaded part	smooth part	threaded part	smooth part	threaded part	smooth part	EN 409
$M_{y,k}$ [Nmm]	1287	2037	3003	4262	7581	5766		9895		20427		32540		2009
Characteristic withdrawal parameter														
$F_{ax,90,k}$ [Nmm <sup>2</sup> ]	17,03	16,81	16,32	16,12	15,66	15,04	15,05	15,03	EN 1382 2018					
$F_{ax,0,k}$ [Nmm <sup>2</sup> ]	11,92	11,77	11,84	12,64	13,06	12,29	10,61	10,42						
Characteristic head pull-through parameter	countersunk	countersunk	countersunk	countersunk	countersunk	wafer	countersunk	wafer	countersunk	wafer	countersunk	wafer	EN 1383	
$F_{head,k}$ [Nmm <sup>2</sup> ]	26,02	25,62	24,12	23,11	22,85	26,51	21,92	25,14	23,52	25,23	21,35	23,15	2016	
Characteristic yield tensile capacity														
$F_{tens,k}$ [kN]	2,93	4,32	5,22	7,19	8,03	13,49	23,29	30,77	EN 1383 2016					
Characteristic yield strength														
$R_m$ [MPa]	1005,7	1197	1197,1	1292,6	1153,4	1234,6	1133,1	1075,8	EN 1383 2016					
$R_{p0,2}$ [MPa]	1089,2	1179,7	10,94	1281,2	1134,1	1183,8	1042,7	903,1						
Characteristic torsional ratio														
$F_{tor,k} / R_{tor,k}$	Material	Characteristic torsional strength / characteristic torsional resistance into timber												EN ISO 10666
	C24	1,12/0,39=2,85	2,21/0,69=3,20	3,21/1,07=3,01	4,63/1,97=2,35	5,95/2,93=2,03	12,22/5,16=2,37	27,57/9,77=2,82	49,61/17,51=2,83	2000				
480 kg/m <sup>3</sup>	1,22/0,45=2,50	2,21/0,79=2,81	3,21/1,22=2,64	4,63/2,24=2,07	5,95/3,35=1,78	12,22/5,88=2,08	27,57/11,14=2,47	49,61/19,96=2,49	EN 1573 2016					
Bending angle (°)	45,06	49,91	49,83	45,21	39,47	55,62	45,19	36,14	EAD 130118-01-0603					
Average value of durability against corrosion protective layer thickness (µm)	26,3	30,7	23,1	23,5	14,5	24,9	11,3	13,1	EN 1995-1-1 A2 2015					
Service class	1	1	1	2	2	2	2	2						
* density of timber 350 kg/m <sup>3</sup> NA – not available														

HPL construction screw – plant 2															
Based characteristic	Ø3,0	Ø3,5	Ø4,0	Ø4,5	Ø5,0	Ø6,0	Ø8,0	Ø10,0	Harmonized standard / EAD						
$D$ (mm)	3,03	3,57	4,04	4,41	4,92	6,12	8,05	9,85	EN 14592+A1 2012						
$D_1$ (mm)	1,94	2,26	2,48	2,81	3,21	4,04	5,34	6,36							
$D_h^{countersunk}$ (mm)	5,79	6,69	7,94	8,81	9,83	11,81	14,61	17,64							
$D_h^{wafer}$ (mm)	NA	NA	NA	NA	11,77	15,41	21,21	24,94							
$D_s$ (mm)	2,15	2,45	2,76	3,15	3,45	4,33	5,76	7,02							
$p$ thread pitch (mm)	2,09	2,17	2,58	2,72	3,37	4,84	5,49	6,59							
Characteristic yield moment	threaded part	threaded part	threaded part	threaded part	smooth part	threaded part	smooth part	threaded part	smooth part	threaded part	smooth part	threaded part	smooth part	threaded part	EN 409
$M_{y,k}$ [Nmm]	1287	2,37	3003	5945	4289	8160	6161		9895		20427		37222		2009
Characteristic withdrawal parameter															
$F_{ax,90,k}$ [Nmm <sup>2</sup> ]	17,03	16,68	16,32	15,57	16,01	15,92	15,12	14,28	EN 1382 2018						
$F_{ax,0,k}$ [Nmm <sup>2</sup> ]	11,92	11,77	11,84	12,97	12,76	12,69	12,51	11,29							
Characteristic head pull-through parameter	countersunk	countersunk	countersunk	countersunk	countersunk	wafer	countersunk	wafer	countersunk	wafer	countersunk	wafer	EN 1383 2016		
$F_{head,k}$ [Nmm <sup>2</sup> ]	26,94	25,62	24,59	23,84	23,16	26,45	21,92	25,14	23,61	25,73	21,35	23,16			
Characteristic yield tensile capacity	23,15														EN 1383
$F_{tens,k}$ [kN]	2,93	4,32	5,22	7,19	8,4	14,95	24,79	30,77	2016						
Characteristic yield strength															
$R_m$ [MPa]	1005,7	1197	1197,1	1292,6	1153,4	1301,6	1228,8	1075,8	EN 1383 2016						
$R_{p0,2}$ [MPa]	1089,2	1179,7	1094	1281,2	1134,1	1283,7	1210,4	903,1							
Characteristic torsional ratio	Material	Characteristic torsional strength / characteristic torsional resistance into timber												EN ISO 10666	
$F_{tor,k} / R_{tor,k}$	C24	1,12/0,39=2,85	2,15/0,65=3,32	3,21/1,07=3,01	4,54/1,65=2,76	6,77/1,97=3,44	13,95/3,98=3,51	29,15/8,46=3,44	51,34/17,38=2,95	2000					
	480 kg/m <sup>3</sup>	1,12/0,45=2,50	2,15/0,74=2,91	3,21/1,22=2,64	4,54/1,88=2,42	6,77/2,25=3,01	13,95/4,53=3,08	29,15/9,65=3,02	51,34/19,81=2,59						EN 1573 2016
Bending angle (°)	45,06	49,91	49,83	45,21	39,47	55,62	50,73	47,42	EAD 130118-01-0603						
Average value of durability against corrosion protective layer thickness (µm)	26,3	30,7	23,1	23,5	14,5	24,9	16,9	13,7	EN 1995-1-1 A2 2015						
Service class	1	1	1	2	2	2	2	2							
* density of timber 350 kg/m <sup>3</sup> NA – not available															

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3

Signed for and on behalf of the manufacturer by:

Kubeček Vlastimil  
quality manager

Velké Poříčí 27.8.2021

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