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DECLARATION of PERFORMANCE

No 01/MPZ3/0371/2019

CE

1. *Unique identification code of the product-type*: **MPZ 3**
2. *Intended use:* **MPZ 3 self-drilling screws are intended to be used for fastening steel sheeting to steel supporting structures.**
3. *Name, registered trade name or registered trade mark and contact address of the manufacturer:* **Marcopol Sp. z o.o. Producer of Bolts str. Oliwska 100, 80-209 Chwaszczyno Poland**
4. *System or systems of assessment and verification of constancy of performance of the construction product:* **System "2+" of assessment**
5. *European Technical Assessment:* **ETA 18/0371 issued 15.02.2019**
   Technical Assessment Body: **Technický a zkušební ústav stavební Praha, s.p.**
   Notified Body: **Number: 1488 - Instytut Techniki Budowlanej**
6. *Declared performance:*

	Essential characteristics	Performance	Technical specification
3.1 BWR 1: Mechanical resistance and stability			
3.1.1.	Characteristic Shear Resistance of the Connection	see Table 1 and 2 below	ETA 18/0371
3.1.2.	Characteristic Tension Resistance of the Connection	see Table 1 and 2 below	ETA 18/0371
3.1.3.	Durability		
	Zinc coating min.12 mikron	Category C1	EN 1993-1-3; EN 1993-1-4; EN 1999-1-4
3.2 BWR 2: Safety in case of fire			
3.2.1.	Reaction to fire	The performance of the product is class A1	EN 13501-1
3.3 BWR 3: Hygiene, health and the environment			
3.3.1.	Content, emission and/or release of dangerous substances	Content of dangerous substances less than 0,1%	EU Regulation REACH 1907/2006

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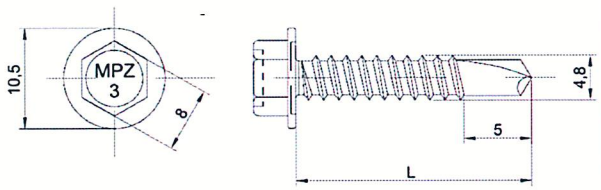
Table 1: Characteristic Tension Resistance $N_{R.k}$ and Shear Resistance $V_{R,k}$ [kN]



Materials
Fastener: carbon steel – SAE1022
quenched, tempered and galvanized (≥ 12 µm)
Washer: -
Component I: S280GD, S320GD or S350GD – EN 10346
Component II: S280GD, S320GD or S350GD – EN 10346
S235 – EN 10025-1

Drilling capacity: $\Sigma(t_{N2} + t_{II}) \leq 4{,}50$ mm

Timber substructures
no performance determined

$t_{N,II}$ [mm]		2,00	2,50	3,00	4,00	5,00	6,00	7,00	8,00	Wood class ≥ C24		
$M_{t,nom}$		3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	1,64	1,64	1,64	—	—	—	—	—	—	—	*bearing resistance of component I **bearing resistance of component II
	0,88	1,80	1,80	1,80	—	—	—	—	—	—	—	
	1,00	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,13	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,25	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,50	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	1,21	1,21	1,21	—	—	—	—	—	—	—	*bearing resistance of component II **bearing resistance of component I
	0,88	1,43	1,43	1,43	—	—	—	—	—	—	—	
	1,00	1,91	1,91	1,91	—	—	—	—	—	—	—	
	1,13	1,91	1,91	1,91	—	—	—	—	—	—	—	
	1,25	2,03	2,03	2,03	—	—	—	—	—	—	—	
	1,50	2,03	2,03	2,03	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPZ 3 fastening screws for metal members and sheeting

MPZ 3 4,8 × L
with hexagon head

Table 1

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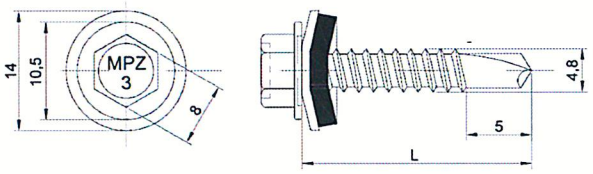
Table 2: Characteristic Tension Resistance $N_{R.k}$ and Shear Resistance $V_{R,k}$ [kN]



Materials
Fastener: carbon steel – SAE1022
quenched, tempered and galvanized (≥ 12 µm)
Washer: EPDM sealing ring with metal top
made of coated carbon steel
Component I: S280GD, S320GD or S350GD – EN 10346
Component II: S280GD, S320GD or S350GD – EN 10346
S235 – EN 10025-1

Drilling capacity: $\Sigma(t_{N2} + t_{II}) \leq 4{,}50$ mm

Timber substructures
no performance determined

$t_{N,II}$ [mm]		2,00	2,50	3,00	4,00	5,00	6,00	7,00	8,00	Wood class ≥ C24		
$M_{t,nom}$		3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	1,64	1,64	1,64	—	—	—	—	—	—	—	*bearing resistance of component I **bearing resistance of component II
	0,88	1,80	1,80	1,80	—	—	—	—	—	—	—	
	1,00	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,13	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,25	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,50	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	3,03	3,03	3,30	—	—	—	—	—	—	—	*bearing resistance of component II **bearing resistance of component I
	0,88	3,03	3,03	4,00	—	—	—	—	—	—	—	
	1,00	3,03	3,03	4,13	—	—	—	—	—	—	—	
	1,13	3,03	3,03	4,13	—	—	—	—	—	—	—	
	1,25	3,03	3,03	4,13	—	—	—	—	—	—	—	
	1,50	3,03	3,03	4,13	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPZ 3 fastening screws for metal members and sheeting

MPZ 3 4,8 × L + S14

with hexagon head and sealing washer ≥ Ø14 mm
with metal top made of coated carbon steel

Table 2

7. **The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point *6***
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3.

Signed by:

Chwaszczyno, 01.04.2019

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju Produktów

Janusz Kabała