



PRODUCT DATASHEET

SELF TAPPING MASONRY SCREW

PRODUCT DETAILS

| | |
|--------------------|--|
| Purpose: | Fixing timber battens, trunking, track and general components to concrete and masonry substrates |
| Head style: | Countersunk or slotted hexagonal |
| Drive bit: | Phillips No. 2 or No.3 female socket, or, 5/16" hexagonal male socket (with slot) |
| Point: | Nail (pyramidal) |
| Coating: | EvoShield® 500Hr NSST resistant (Aluminium/ Zinc flake bound in resin) |
| Material: | SAE C1022 Carbon steel |

GENERAL PHYSICAL CHARACTERISTICS

| SKU | Nominal Dimensions, $d_{nom} \times L_{nom}$ (mm) | Fixture Limitations | |
|---------------------------------|---|-----------------------------------|-----------------------------------|
| | | Min. Thickness, t_{min} (mm) | Max. Thickness, t_{max} (mm) |
| Countersunk (90°) Headed | | | |
| MSCSK4.8-32-2 | 4.8 x 32.0 | 0 | 7 |
| MSCSK4.8-45-2 | 4.8 x 45.0 | 0 | 20 |
| MSCSK4.8-57-2 | 4.8 x 57.0 | 0 | 32 |
| MSCSK4.8-70-2 | 4.8 x 70.0 | 30 | 45 |
| MSCSK4.8-82-2 | 4.8 x 82.0 | 45 | 57 |
| MSCSK4.8-100-2 | 4.8 x 100.0 | 55 | 75 |
| MSCSK6.3-32-3 | 6.3 x 32.0 | 0 | 7 |
| MSCSK6.3-45-3 | 6.3 x 45.0 | 0 | 20 |
| MSCSK6.3-57-3 | 6.3 x 57.0 | 0 | 32 |
| MSCSK6.3-70-3 | 6.3 x 70.0 | 30 | 45 |
| MSCSK6.3-82-3 | 6.3 x 82.0 | 45 | 57 |
| MSCSK6.3-100-3 | 6.3 x 100.0 | 55 | 75 |
| MSCSK6.3-125-3 | 6.3 x 125.0 | 75 | 100 |
| MSCSK6.3-150-3 | 6.3 x 150.0 | 100 | 125 |
| Hexagonal Headed | | | |
| MSHH6.3-32-516 | 6.3 x 32.0 | 0 | 7 |
| MSHH6.3-45-516 | 6.3 x 45.0 | 0 | 20 |
| MSHH6.3-57-516 | 6.3 x 57.0 | 0 | 32 |
| MSHH6.3-70-516 | 6.3 x 70.0 | 30 | 45 |
| MSHH6.3-82-516 | 6.3 x 82.0 | 45 | 57 |
| MSHH6.3-100-516 | 6.3 x 100.0 | 55 | 75 |
| MSHH6.3-125-516 | 6.3 x 125.0 | 75 | 100 |
| MSHH6.3-140-516 | 6.3 x 140.0 | 80 | 105 |
| MSHH6.3-160-516 | 6.3 x 160.0 | 100 | 125 |
| MSHH6.3-180-516 | 6.3 x 180.0 | 120 | 145 |
| MSHH6.3-200-516 | 6.3 x 200.0 | 140 | 165 |
| MSHH6.3-230-516 | 6.3 x 230.0 | 170 | 185 |
| MSHH6.3-254-516 | 6.3 x 254.0 | 190 | 215 |

| SKU | Nominal Dimensions, $d_{nom} \times L_{nom}$ (mm) | Fixture Limitations | |
|--|---|--------------------------------|--------------------------------|
| | | Min. Thickness, t_{min} (mm) | Max. Thickness, t_{max} (mm) |
| Hexagonal Headed With 16mm Washer | | | |
| MSHHW6.3-32-516 | 6.3 x 32.0 | 0 | 7 |
| MSHHW6.3-45-516 | 6.3 x 45.0 | 0 | 20 |
| MSHHW6.3-57-516 | 6.3 x 57.0 | 0 | 32 |

PRODUCT SETTING DETAILS

| Substrate Type | Parameter | Screw Nominal Diameter, d_{nom} (mm) | |
|--|--|--|-------|
| | | 4.8 | 6.3 |
| All types | Nominal Embedment Depth, h_1 (mm) | 25 | 25 |
| | Nominal Drill Hole Diameter, d_0 (mm) | 4.35 | 5.15 |
| | Clearance Hole Diameter, d_f (mm) | 6 | 8 |
| | Installation Torque, T_{inst} (Nm) | < 3.0 | < 7.0 |
| Non-Cracked Concrete (> 20 MPa < 80 MPa) | Minimum Member Thickness, h_c (mm) | 100 | 100 |
| | Minimum Edge Distance, c_{min} (mm) | 50 | 55 |
| | Minimum Spacing, s_{min} (mm) | 50 | 55 |
| Cracked Concrete (> 20 MPa < 80 MPa) | Minimum Member Thickness, h_{min} (mm) | 100 | 100 |
| | Minimum Edge Distance, c_{min} (mm) | 50 | 55 |
| | Minimum Spacing, s_{min} (mm) | 40 | 50 |

CHARACTERISTIC WITHDRAWAL RESISTANCE, NRk

| Diameter (mm) | Embedment depth (mm) | C30/35 Concrete (35N/mm ²) | Aerated Concrete Block (7N/mm ²) | Class B Engineering Brick (75N/mm ²) |
|---------------|----------------------|--|--|--|
| 4.8 | 25.0 | 1570N | 1000N | 1570N |
| | 35.0 | 4500N | 2930N | 2250N |
| 6.3 | 25.0 | 4050N | 1580N | 3730N |
| | 35.0 | 6140N | 4510N | 4980N |

CHARACTERISTIC MECHANICAL PROPERTIES

| | Magnitude | |
|--------------------------------------|-----------|---------|
| | 4.8mm | 6.3mm |
| Tensile capacity, ($F_{ult,Rk}$) | 11,680N | 21,240N |
| Shear capacity, ($V_{ult,Rk}$) | 7,560N | 13,890N |
| Torsional Capacity, ($T_{ult,Rk}$) | 7.2Nm | 20.3Nm |

NOTE: The results expressed in this document are determined from empirical testing. Specifiers, end-users and other third parties should make their own decision(s) on what safety factors to use relevant to their design(s)/ application(s). This document is provided, strictly: without prejudice, without recourse, without liability, non-assumptit, no assured value, errors and omissions excepted, subject to change without notice and all rights reserved.
©Evolution Fasteners UK Ltd, 2021.