FS Cables
Shoal Export

01727 840 841
+44 1727 849 841

sales@fscables.com
sales@shoal-export.com

www.fscables.com
www.shoal-export.com

MS4737M
Self Tapping Masonry Screw 4.7mm x 37mm & washers

Product Details

Designed for:	Fixing of Firefly clips to trunking, timber track and general components into concrete and masonry.
Head style:	Countersunk
Drive bit:	Phillips 2
Drill point:	Nail point
Coating:	500hr Evoshield®
Shank material:	Carbon steel
Material grade:	AISI C1022

Size	Fixture Thickness mm	Minimum Drill Depth mm	Minimum Embedment Depth mm	Pilot Hole mm
4.7 x 37mm	5.0 – 20.0	35.0	25.0	4.35

Characteristic pull out loads				
Embedment depth mm	35N /mm² concrete kN	Common masonry kN	Dense block kN	Hollow block kN
25	2.3	1.3	1.4	n/a
30	4.3	1.5	2.0	5.0
35	5.2	2.3	2.8	5.4
40	6.1	3.2	4.9	n/a

Hardness Rating (Vickers scale)	
Surface Hardness HV	Core Hardness HV
630.0	430.0

Ultimate mechanical performance	
Tensile Strength kN	Shear Strength kN
10.8	13.0

SPECIALISED WIRING ACCESSORIES LTD
Abbey Mills Charfield Road Kingswood Wotton-Under-Edge Glos GL12 8RL
Tel: 01453 844 333 Fax: 01453 842 224 E-mail:sales@swaonline.co.uk
www.swaonline.co.uk

Influence of Concrete Strenth on Performance								
Concrete Strength (As per BS EN 206-1:2000)	Nominal Embedment Depth mm	Concrete Grade						
		C20/25	C25/30	C30/37	C34/45	C40/50	C50/60	>C50/60
30N/mm²	32.0	0.70	1.00	1.00	1.10	1.15	1.20	1.25

Advanced Setting Data		
Substrate Type	Category	
n/a	Nominal embedment depth	32.0mm
Non cracked concrete (>30N/mm²)	Minimum base material thickness	100.0mm
	Minimum screw spacing	50.0mm
	Minimum edge distance	50.0mm
Cracked concrete (>30N/mm²)	Minimum base material thickness	100.0mm
	Minimum screw spacing	50.0mm
	Minimum screw spacing	50.0mm

Influence of Edge Distance on Performance										
% of stated minimum	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Reduction Factor	0.45	0.55	0.65	0.70	0.7	0.75	0.80	0.85	0.90	1.0

Influence of Anchor Spacing on Performance										
% of stated minimum	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Reduction Factor	0.45	0.55	0.65	0.70	0.7	0.75	0.80	0.85	0.90	1.0

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Testing

All test results were derived from empirical testing performed by ETAS (Evolution Testing & Analytical Services) a UKAS (United Kingdom Accreditation Service) accredited testing laboratory (Accreditation No. 7485).
The following tests were performed to the following standards.

Testing Procedures

Test / Parameter	Standard / Method / Procedure
Ultimate Tensile	**ISO 6892-1:2009** "Metallic materials – tensile testing – Part 1: Method of test at room temperature."
Ultimate Shear	**MIL-STD-1312-13** "Military Standard: Fastener test method (Method 13) Double shear test."
Pull Out (Withdrawal Force)	**EN 14566:2009** "Mechanical fasteners for gypsum plasterboard systems. Definitions, requirements and test methods."
Pull Over	**EN 14592:2008** "Timber structures. Dowel type fasteners. Requirements. "
Hardness	**ISO 650 7-1: 2005** "Metallic materials – Vickers hardness test - Part 1: Test Method."
Corrosion Resistance	**EN ISO 9227: 2012** "Corrosion tests in artificial atmospheres. Salt spray tests".
Drilling Time Test	**EN 14566: 2009** "Mechanical fasteners for gypsum plasterboard systems. Definitions, requirements and test methods."