



10 July 2014

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Doc. No 4944-3918/3

PRODUCT VERIFICATION AND ASSESSMENT REPORT

Client: RAPID EPS
Address: 18 EDOLS ST GEELONG 3220
Subject: EVALUATION OF FIXED EDGE PROTECTION SYSTEM
Client Reference: MR MARK FINEGAN
Client's Order No: TBA
Specification: AS/NZS 4994.1 "Temporary Edge Protection Part1: General Requirements"
Correlation/Report No.: 4944-3918/3
Test Officer: CHRIS VINES
Test Date: 17/06/2013

1.0 INTRODUCTION.

It was requested that a temporary edge protection system for slab edges be tested in accordance with AS/NZS 4494.2 – 2009. The system was designed specifically for use where the vertical poles could be installed between flat concrete floor and roof using a friction fit system. Each vertical pole consisted of a round hollow tube of adjustable length (48mm diameter base and 42mm diameter extension) with a clawed shaped base plates (75mm square and 6mm thick with the corners folder up). Each post fixed to the concrete slab in the vertical position and fixed in place using the indication friction system integral with the post. The guard panels used were as per Rapid EPS item no NA003-modified. Testing of the panels was performed with a single panel and double panel system. The test assembly consisted of two vertical poles and one or two panels as needed.

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2.0 INWARDS HORIZONTAL STATIC TESTS

2.1 Post Static Load Testing

The subject test post was installed as per the fabricators instructions. The following test parameters were used to generate the test results as listed below;

Test sample:	Rapid post set at 2680mm
Test configuration:	Horizontal inwards
Rails/panels:	Not present
Load application point:	1340mm (mid pole height)
Pre load:	100 N (10kg) for sixty seconds
Proof Test load:	600 N (61 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Measured deflection under load:	20mm
Measured deflection after load:	0mm
Test configuration:	Horizontal outwards
Load application point:	Bottom of pole
Proof Test load:	600 N (61 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Measured deflection under load:	1mm
Measured deflection after load:	0mm
Test configuration:	Horizontal outwards (mid and bottom)
Ultimate load:	1200 N (122 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Result:	No structural failure observed and deflections at proof load were less than 101mm - Complies



2.2 Panel Static Load Testing

Test sample:	Top of panel between posts
Rail configuration:	2 x posts connected with 1 x panel on 2700mm centres
Panels:	Steel NA003-modified
Load configuration:	Vertical down
Load application point:	In line with top of panel
Pre load:	100 N (10kg) for sixty seconds
Load Cell:	0-2000kg tension/compression A1770
Test load:	600 N (61 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Measured deflection under load:	1mm
Measured deflection after load:	0mm
Load configuration:	Horizontal inwards
Load application point:	In line with top of panel
Pre load:	100 N (10kg) for sixty seconds
Load Cell:	0-2000kg tension/compression A1770
Test load:	600 N (61 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Measured deflection under load:	85mm
Measured deflection after load:	13mm
Load configuration:	Horizontal outwards
Load application point:	In line with top rail
Pre load:	100 N (10kg) for sixty seconds
Load Cell:	0-2000kg tension/compression A1770
Test load:	600 N (61 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Measured deflection under load:	84mm
Measured deflection after load:	17mm

Result: No structural failure observed and deflections at proof load were less than 101mm - Complies
Top rail only was tested as it was the same as the mid rail.



Test sample:	Mid panel (mid-section)
Rail configuration:	2 x posts connected with 1 panel
Panels:	Steel NA003-modified
Load configuration:	Horizontal Out
Load application point:	Mid panel on 200mm disk
Pre load:	100 N (10kg) for sixty seconds
Load Cell:	0-2000kg tension/compression A1770
Test load:	600 N (61 kg)
Load Cell:	0-2000kg tension/compression A1770
Application time:	305 seconds
Measured deflection under load:	75mm
Measured deflection after load:	5mm

Result: No structural failure observed and deflections at proof load were less than 101mm - Complies

5.0 REMARKS

The as supplied posts (Rapid Post) at 2680mm high and panels (NA003 modified) comply with AS/NZS 4994.1-2009 appendices A, & B when secured to a concrete surface using the Rapid Post integral friction system in a two post configuration.



Figure: 1

Subject: Vertical Rapid Post system installed with a single panel and secured in position with the friction locks.



Figure: 2

Subject: General overhead fixing of the Rapid Post with the indicator flag horizontal (red) meaning sufficient vertical pressure has been applied. Note also the clawed foot in contact with the concrete surface (same on bottom foot).



Figure: 3
Subject: Panel under horizontal load test.