

SUMMARY

Test Reference

J0072

Test Agency

MIRA Ltd, Watling Street, Nuneaton,
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Product

Designation
Brief Description

Marshalls 25/40 Standard Shallow Mount Bollard
Shallow mount bollard made up of concentric tubes with overall outer diameter 168.3mm. Bollard mounted into Beam I-section foundation frame. Foundation depth 155mm.

Drawings Supplied
Installation of Foundation (Date)
Installation of Product (Date)

16th April 2010
2nd July 2010
2nd July 2010

Test Vehicle

Make/Type
VIN
Kerb Weight
GVW

Toyota Hilux 4x4 Single Cab Pick-up
JT131LNG800027822
1648
2515

Impact Specification

Mass (kg)
Speed (km/h)
Angle (deg)
Energy (kJ)

Target	Achieved
2500	2515
64	64.5
90	89.8
395	403

Product Result

Bollard bent rearwards. Front of vehicle launched. Vehicle to rest on top of bollard. Decorative sleeve lifted off bollard and trapped in front of vehicle. Bollard residual angle 70.2deg

Penetration

Dynamic Vehicle Penetration (m)
Static Vehicle Penetration (m)
Dispersion of Debris (m)

2.34
2.34
0.0

Manufacturer

Marshalls Mono Ltd, Birkby Grange
Birkby Hall Road, Huddersfield, HD2 2YA

PAS68:2010 Performance Classification – Vehicle impact Test

Performance Classification: V/2500(M2)/64/90:2.3/0.0

Note: not given for load-bed penetration > 25m

Product Type	Bollard
Test Mass (kg)	2515
Test Speed (km/h)	64.5
Vehicle Penetration (m)	2.3
Dispersion of Debris (m)	0.0
Engine Running post test	No
Vehicle Driveable Post test	No
Follow-on vehicle could pass barrier	No