

SUMMARY OF RESULTS

Test Agency

MIRA Ltd, Watling Street, Nuneaton,
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Product

Designation ER:1407 Fixed Bollard
Drawings Supplied 7th October 2009
Installation of Foundation (Date) 29th June 2009
Installation of Product (Date) 7th October 2009

Test Vehicle

Make/Type Toyota Hilux 4x4 Single Cab pick-up
VIN JTFKP6267000323315
Kerb Weight 1622
GVW 2515

Impact Specification

| | Target | Achieved |
|--------------|--------|----------|
| Mass (kg) | 2500 | 2501 |
| Speed (km/h) | 64 | 63.7 |
| Angle (deg) | 90 | 90.8 |
| Energy (kJ) | 395 | 392 |

Product Result

Vehicle halted by bollard. Bollard deflected to 71.1deg. Small crack in outer shell at bottom of rear face. No foundation displacement.

Penetration

Dynamic Vehicle Load-bed Penetration (m) -0.414
Static Vehicle Load-bed Penetration (m) -0.625
Dispersion of Debris (m) No debris ejected

Manufacturer

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

PAS68:2007 Performance Classification – Vehicle impact Test

Performance Classification: V/2500/64/90:0.0/0.0

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

| | |
|--------------------------------------|---------------|
| Product Type | Fixed Bollard |
| Test Mass (kg) | 2501 |
| Test Speed (km/h) | 63.7 |
| Vehicle Penetration (m) | 0.0 |
| Dispersion of Debris (m) | 0.0 |
| Engine Running post test | No |
| Vehicle Driveable Post test | No |
| Follow-on vehicle could pass barrier | No |