



Accepted Safety Barrier Products - GD 300

Safety Barrier Products

Safety barriers are intended to safely redirect the majority of vehicles that have left the roadway.

The Austroads Safety Barrier Assessment Panel (ASBAP) assesses the crashworthiness and suitability of road safety barriers, systems and devices for deployment on roads managed by Australian/New Zealand road agencies in line with AS/NZS 3845.

Performance

AS/NZS 3845.1:2015 and AS/NZS 3845.2:2017 outlines AASHTO Manual for Assessing Safety Hardware (MASH) as the current basis for crash testing protocol. In line with AS/NZS 3845, ASBAP has updated its product submission criteria and is transitioning the current suite of accepted products.

DPTI is adopting MASH as the nominal standard for road safety hardware in line with ASBAP and AS/NZS 3845.

MASH testing results will be used as the primary performance criteria in promoting any road safety hardware. Therefore it is a DPTI requirement to select products, if possible, that have undergone the full suite of MASH testing.

National Scheme

A national scheme is being developed to ensure the people who design, install, and maintain road safety barriers on Australia and New Zealand's road network are appropriately trained. Austroads has partnered with Lantra (UK) to develop a national accreditation scheme that will require the certification of all people engaged in the design, installation, and maintenance of any road safety barrier system used in New Zealand or Australia.

Legacy Products

No new installations are permitted. Existing installations may be maintained until the end of their service. When replacements of existing installations are required, it is recommended that new accepted MASH-tested products are to be installed. MASH tested products provide an increased level of safety to road users.



1. BARRIERS – PERMANENT

1.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Concrete Single Slope Barrier	TL3 - TL5	Public Domain
BarrierGuard 800 Steel Safety Barrier	TL3	Ingal Civil Products
BarrierGuard MDS Steel Safety Barrier	TL3	Ingal Civil Products
Dolre Low Stress Parapet	TL4	LB Australia
EZY-Guard 4 Steel Rail Safety Barrier	TL3	Ingal Civil Products
EZY-Guard High Containment Steel Rail Safety Barrier	TL4	Ingal Civil Products
EZY-Guard Smart Steel Rail Safety Barrier	TL3	Ingal Civil Products
RAMSHIELD Steel Safety Barrier	TL3	Safe Direction
Safety Roller Steel Rail Safety Barrier	TL3 - TL4	KSI Global Australia
Sentry Median Steel Rail Safety Barrier	TL3	Australian Construction Products
Sentry W-Beam Steel Rail Safety Barrier	TL3	Australian Construction Products
Sentryline-M Wire Rope	TL3 – TL4	Australian Construction Products

1.2 NCHRP 350 Tested Products – Accepted

System Name	Test Level	Supplier
QUICKCHANGE Reactive Tension Concrete Safety Barrier	TL3	Lindsay Transportation Solutions



1.3 NCHRP 350 Tested Products – Conditionally Accepted

System Name	Test Level	Supplier
* Flexfence - 4 Wire Rope	NCHRP TL4 MASH TL3	Ingal Civil Products
* Sentryline II - 4 Wire Rope	NCHRP TL4 MASH TL3	Australian Construction Products

In line with the changes to AS/NZS 3845 and the recommendation of the Austroads Safety Barrier assessment Panel, DPTI is transitioning the current suite of accepted safety barrier systems and devices to MASH test protocol. MASH tested products provide an increased level of safety to road users.

As at 1 January 2020 these acceptance conditions will be updated in line with MASH reference points. Consequently, these products will be accepted at MASH Test Level 3 with a dynamic deflection and working width of 3.0 metres.

* **Phase out** – Please note: new installations are only permitted on the classified road network until 30 September 2020. Any new installation post this date will require a MASH tested product.

1.4 LEGACY Products

System Name	Test Level	Supplier
Flexfence - 3 Wire Rope	TL3	Ingal Civil Products
Flexfence - 4 Wire Rope	TL3	Ingal Civil Products
Thrie-Beam Steel Rail Safety Barrier	TL3	Public Domain
W-Beam Steel Rail Safety Barrier	TL3	Public Domain

2. BARRIERS – TEMPORARY

2.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Armorzone Plastic Water Filled System	TL2	Ingal Civil Products
BarrierGuard 800 Safety Barrier	TL3	Ingal Civil Products
BarrierGuard MDS Safety Barrier	TL3	Ingal Civil Products
DB80 K150 Concrete Safety Barrier	TL3	Orange Hire
Defender Barrier 70 Safety Barrier	TL2	Safe Barrier
Defender Barrier 100 HC Safety Barrier	TL3 – TL4	Safe Barrier
Defender Barrier 100 FS Safety Barrier	TL3	Safe Barrier
Defender Barrier 100 LDS Safety Barrier	TL3	Safe Barrier
HighwayGuard Safety Barrier	TL3 – TL4	Highway Care International
HighwayGuard LDS Safety Barrier	TL3	Highway Care International
HV2 Longitudinal Barrier	TL3 – TL4	Saferoads
J-J Hooks Concrete Safety Barrier	TL3	Australian Road Barriers
Lo-Ro Cable Water Barrier System	TL2	Jaybro Group
Ricochet Plastic Water Filled System	TL1	TFH Hire Services
Safezone Safety Barrier	TL3 – TL4	Laura Metaal
Safezone LDS Safety Barrier	TL3 – TL4	Laura Metaal
Shield I Water Filled Safety Barrier System	TL1	National Plastics
T-LOK MASH F-Type Concrete Safety Barrier	TL3	Saferoads
Zoneguard Steel Safety Barrier	TL3	Hill and Smith
Zoneguard MDS Steel Safety Barrier	TL3	Hill and Smith

2.2 NCHRP 350 Tested Products – Accepted

System Name	Test Level	Supplier
BarrierGuard LDS Safety Barrier	TL3	Ingal Civil Products
Ironman Hybrid Steel Safety Barrier	TL3	Saferoads
J-J Hooks Concrete Safety Barrier	TL3	Australian Road Barriers
T-Lok 350 F-Type Concrete Safety Barrier	TL2	Saferoads

3. TERMINALS – PERMANENT

3.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
ET-SS Terminal	TL3	Ingal Civil Products
Max Tension Guardrail Terminal	TL2 - TL3	Australian Construction Products
MSKT-MASH Sequential Kinking Terminal	TL3	Safe Direction
Trailing Steel Rail Terminal	TL3	Public Domain

3.2 LEGACY Products

System Name	Test Level	Supplier
ET2000 Plus Steel Rail	TL2 - TL3	Ingal Civil Products
Fleat 350 Steel Rail	TL2 – TL3	Safe Direction
Fleat-SP Steel Rail	TL3	Safe Direction
SKT 350 Steel Rail	TL2 – TL3	Safe Direction
SKT-SP Steel Rail	TL3	Safe Direction
Trend 350 Steel Rail	TL3	Ingal Civil Products
X-Tension 350 Steel Rail	TL3	Australian Construction Products

4. TERMINALS – TEMPORARY

4.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Absorb-M Terminal	TL2	Australian Construction Products
SLED Plastic Water Filled End Terminal – Temporary	TL3	Saferoads

4.2 NCHRP 350 Tested Products – Accepted

System Name	Test Level	Supplier
Absorb 350 Plastic Terminal	TL3	Australian Construction Products

5. CRASH CUSHIONS

5.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Hercules	TL3	Safe Barriers
Quadguard M10	TL3	Ingal Civil Products
Quadguard Elite M10	TL3	Ingal Civil Products
SMART Steel	TL2 – TL3	LB Australia
Universal TAU-M	TL2 – TL3	Australian Construction Products

5.2 NCHRP 350 Tested Products – Accepted

System Name	Test Level	Supplier
Quadguard CZ	TL3	Ingal Civil Products
Universal TAU II – Temporary	TL3	Australian Construction Products

5.3 LEGACY Products

System Name	Test Level	Supplier
Quadguard Steel Rail – Permanent	TL3	Ingal Civil Products
Tracc Steel Rail	TL3	Ingal Civil Products
Universal TAU II – Permanent	TL3	Australian Construction Products



6. MOBILE BARRIER SYSTEMS

6.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Mobile Barriers MBT-1	TL3	Mobile Barriers LLC
Scorpion II	TL2	A1 Roadlines
Scorpion II	TL3	A1 Roadlines
Verdegro Blade	TL3	Innov8 Equipment

6.2 NCHRP 350 Tested Products – Accepted

System Name	Test Level	Supplier
JL-D-0850 Stuer-Egghe	TL3	J1-LED Intelligent Transport Systems
Scorpion TMA	TL3	A1 Roadlines

Important Notes:

1. Products not listed may still be operationally acceptable under existing arrangements.
2. Operators are recommended to select devices which are fit for purpose to their total requirements. Crashworthiness is just one aspect to consider.

7. GATES

7.1 NCHRP 350 Tested Products – Accepted

System Name	Test Level	Supplier
Armorguard Gate	TL3	Australian Construction Products
BG800 Gate	TL3	Ingal Civil Products
VEVA 3 Median Steel Gate	HC2	Traffic Tech Pty Ltd

8. MOTORCYCLIST PROTECTION

System Name	Test Level	Supplier
Biker-Shield Motorcyclist Rub Rail	Level 2 Severity	Safe Direction
Ingal MPR(Motorcyclist Protection Rail)	Level 1 Severity	Ingal Civil Products
HIASA Motorcyclist Protection Device	Level 1 Severity	Australian Construction Products

9. BOLLARDS & POLE PROTECTION DEVICES

System Name	Test Level	Supplier
Energy Absorbing Bollard (EAB)	AS3845 TL0	Roadside Services & Solutions Pty Ltd Impact Absorbing Systems
OMNI STOP Ultra	AS3845: 1999 Test Level 0	Saferoads
Raptor Pole Protector	NCHRP TL1	Valmont Highway Distribution

10. TRANSITIONS

The following standard drawings show approved transitions:

Drawing No.	Sheet No.	Ref No.	Document Name
S-4064	1		810mm High TL4 Road Concrete Barrier
S-4064	2		1070mm High TL5 Road Concrete Barrier
S-4064	3		Concrete Barrier Installation
S-4050	37	GD201	Steel Beam Guardfence Installation Adjacent to Rigid Barriers
S-4050	39	GD203	Steel Beam Guardfence W/Thrie Beam Installation Detail 2
S-4050	45	GD209	Steel Beam Guardfence Posts, Blockouts & Delineators
S-4050	46	GD210	Steel Beam Guardfence Posts, Blockouts & Anchor Assembly

TEST LEVELS:

Level	MASH – Designed Containment	NCHRP 350 – Designed Containment
TL5	1,100 kg & 2,270 kg at 100 km/h 36,000 kg at 80 km/h	820 kg at 100 km/h & 2,000 kg at 100 km/h 36,000 kg at 80 km/h
TL4	1,100 kg & 2,270 kg at 100km/h 10,000 kg at 90 km/h	820 kg at 100 km/h & 2,000 kg at 100km/h 8,000 kg at 80 km/h
TL3	1,100 kg & 2,270 kg at 100km/h	820 kg at 100 km/h & 2,000 kg at 100km/h
TL2	1,100 kg & 2,270 kg at 70km/h	820 kg at 70 km/h & 2,000 kg at 70km/h
TL1	1,100 kg & 2,270 kg at 50km/h	820 kg at 50 km/h & 2,000 kg at 50km/h



REVISION:

Version	Date	Edit	Approve
v1	January 2020	HJ	PM
v2	January 2020	HJ	PM
v3	February 2020	HJ	PM
v4	March 2020	HJ	PM
v5	April 2020	HJ	PM
v6	June 2020	HJ	PM