

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. DIT 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 DIT requirement to select products, if possible, that have undergone the full suite of MASH testing.

The minimum roadside safety barrier performance level is TL3. If a TL2 treatment is proposed, then specific approval from DIT Technical Services is required.

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.

Austroads Safety Hardware Training and Accreditation Scheme (ASHTAS) will become mandatory in South Australia after 31 December 2024. By 1 January 2025, all individuals installing and maintaining/repairing road safety barriers must be licenced by successfully completing the 'Operative Course'. Requirements for designers will be updated as further training courses become available. Please note that designers will be given 12 months notice from when the designer course becomes available to allow sufficient time to undertake the training. Further details regarding the scheme can be found on the Austroads website.

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.

Accepted Speed Environment

Products accepted in speed environments at 100 km/h may be installed in speed environments of 110 km/h.

1. BARRIERS – PERMANENT

1.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Concrete Single Slope Barrier	TL3 - TL5	Public Domain
Thrie-Beam Steel Rail Safety Barrier	TL3	Public Domain
W-Beam Steel Rail Safety Barrier	TL3	Public Domain
BG800 MDS Steel Safety Barrier	TL3	Highway Care International
BG800 Steel Safety Barrier	TL3 – TL4	Highway Care International
BG800 LDS Steel Safety Barrier	TL2 (modified)	Highway Care International
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
EZY-Guard LDS Safety Barrier	TL3 – TL4	Ingal Civil Products
EZY-Guard HD Safety Barrier	TL3	Ingal Civil Products
MashFlex Wire Rope Safety Barrier	TL3 – TL4	Ingal Civil Products
RAMSHIELD Steel Safety Barrier	TL3	Safe Direction
RAMSHIELD High Containment Steel Safety Barrier	TL4	Safe Direction
CrocGuard Safety Barrier	TL3 – TL4	Safe Direction
Brifen Wire Rope Barrier	TL3	Safe Direction
Safety Roller Steel Rail Safety Barrier	TL3 – TL4	Ambient Technologies Pty Ltd; Australian Construction Products
Sentry Thrie-Beam Safety Barrier	TL3 – TL4	Australian Construction Products
Sentry W-Beam Steel Rail Safety Barrier	TL3	Australian Construction Products
Sentryline-M Wire Rope Barrier	TL3 – TL4	CSP Pacific

1.1 MASH Tested Products – Accepted (continued)

QUICKCHANGE Reactive Tension Concrete Safety Barrier	TL3	Lindsay Transportation Solutions
Robos Safety Barrier System	TL3 – TL4	Robos International Limited
HighwayGuard Safety Barrier	TL3 – TL4	Highway Care International
Safezone Safety Barrier	TL3 – TL4	Jaybro Group
Safezone LDS Safety Barrier	TL3 – TL4	Jaybro Group
HighwayGuard MDS Safety Barrier	TL3	Highway Care International
Safezone MDS Safety Barrier	TL3	Jaybro Group
Ingal RBT (Rigid Barrier Transition)	TL3	Ingal Civil Products
EZY-Guard 4 Median (Back-to-Back) Safety Barrier	TL3	Ingal Civil Products
EZY-Guard High Containment Median (Back-to-Back) Safety Barrier	TL3 – TL4	Ingal Civil Products
HammerBeam Safety Barrier	TL3	Safe Direction
Ramshield Low Deflection Safety Barrier	TL3	Safe Direction
Robos Median Safety Barrier	TL3 – TL4	Robos International Limited

1.4 LEGACY Products

System Name	Test Level	Supplier
Sentry Median Steel Rail Safety Barrier	TL3	Australian Construction Products

2. BARRIERS – TEMPORARY

2.1 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Armorzone Plastic Water Filled System	TL2	Valmont Highway
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 Barriers
Defender Barrier 100 FS Safety Barrier	TL3	Safe Barriers
Defender Barrier 100 LDS Safety Barrier	TL3	Safe Barriers
HighwayGuard Safety Barrier	TL3 – TL4	Highway Care International
HighwayGuard LDS Safety Barrier	TL3 – TL4	Highway Care International
HV2 Longitudinal Barrier	TL3 – TL4	Saferoads
T-LOK MASH F-Type Concrete Safety Barrier	TL3	Saferoads
Ironman Hybrid Steel Safety Barrier	TL2	Saferoads
6 Metre JJ Hooks Safety Barrier	TL3	Australian Road Barriers
Lo-Ro Cable Water Barrier System	TL2	Jaybro Group
PIN and LOOP Barrier	TL3	Retsel Holdings Pty Ltd
Ricochet Plastic Water Filled System	TL1	TFH Hire Services
Safezone Safety Barrier	TL3 – TL4	Jaybro Group
Safezone LDS Safety Barrier	TL3 – TL4	Jaybro Group
Shield I Water Filled Safety Barrier System	TL1	National Plastics
Zoneguard Steel Safety Barrier	TL3	Hill and Smith
Zoneguard MDS Steel Safety Barrier	TL3	Hill and Smith
3.6 Metre JJ Hooks Safety Barrier	TL3	Australian Road Barriers
BG800 MDS Steel Safety Barrier	TL3	Highway Care International
BG800 Steel Safety Barrier	TL3 – TL4	Highway Care International
BG800 LDS Steel Safety Barrier	TL2 (modified)	Highway Care International
DB80 T150S Concrete Safety Barrier	TL3 – TL4	Delta Bloc International GmbH
Rebloc 80SAH 12 8B Safety Barrier	TL3	Hill and Smith Pty Ltd
Rebloc 80SAH 12 Safety Barrier	TL3 – TL4	Hill and Smith Pty Ltd



QUICKCHANGE Reactive Tension Concrete Safety Barrier	TL3	Lindsay Transportation Solutions
--	-----	----------------------------------

2.1 MASH Tested Products – Accepted (continued)

Rebloc 120FA 6 SF Safety Barrier	TL3, TL5	Hill and Smith Pty Ltd
DB80A T150S Concrete Safety Barrier	TL3	Hill and Smith Pty Ltd
Rebloc 80SAH 4 Safety Barrier	TL3	Hill and Smith Pty Ltd
T-LOK Rubber Safety Barrier	TL3	Saferoads
HighwayGuard MDS Safety Barrier	TL3	Highway Care International
Safezone MDS Safety Barrier	TL3	Jaybro Group

2.2 LEGACY Products

System Name	Test Level	Supplier
BG800 LDS Safety Barrier	TL3 – TL4	Ingal Civil Products
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 *	TL2 - 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
Trend Median Terminal *	TL3	Ingal Civil Products

*If used as a departure terminal, rails must be lapped in the direction of impacting traffic as per Austroads technical advice SBTA 17-001.

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 Crash Cushion	TL3	Australian Construction Products
SLED Plastic Water Filled End Terminal – Temporary	TL3	Saferoads

4.2 LEGACY Products

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 CZ	TL2 – TL3	Ingal Civil Products
Quadguard M10	TL2 – 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
ArmorBuffa Plastic Water Filled Crash Cushion	TL2 – TL3	Valmont Highway
Delta Crash Cushion	TL3	TrafFix Devices, Inc
Tau-XR Crash Cushion	TL3	Lindsay Transportation Services

5.2 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
Scorpion II Truck Mounted Attenuator	TL3	A1 Roadlines
Verdegro Blade	TL3	Innov8 Equipment
TTMA-200 Trailer Truck Mounted Attenuator	TL3	Gregory Industries
Silke MASH TMA	TL3	J1-LED Intelligent Transport Systems
Scorpion II Metro-Slim	TL2	A1 Roadlines

6.2 LEGACY Products

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 MASH Tested Products – Accepted

System Name	Test Level	Supplier
Cado Emergency Gate - Permanent	TL3	Traffic Tech Pty Ltd

7.1 LEGACY Products

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 and Solutions Pty Ltd Impact Absorbing Systems Pty Ltd Automotive Safety Engineering Pty Ltd
Raptor Pole Protector	NCHRP TL1	Valmont Highway

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
v7	September 2020	HJ/AM	PM
v8	November 2020	HJ	PM
v9	December 2020	HJ	PM
v10	March 2021	AM	PM
v11	April 2021	AM	PM
v12	April 2021	AM	PM
v13	June 2021	AM	PM
v14	September 2021	AM	PM
v15	February 2022	AM	PM
v16	March 2022	AM	PM
v17	June 2022	AM	PM
v18	October 2022	AM	PM
v19	May 2023	AM	PM
v20	December 2023	AM	BvZ
v21	February 2024	DC	BvZ
v22	June 2024	DC/RJ	BvZ
v23	June 2024	RJ	BvZ
v24	October 2024	CC	BvZ