

IN THE BATTLE SINCE 1888



AUSTRALIAN MUNITIONS

PRODUCT RANGE AND SPECIFICS

AUSTRALIAN MUNITIONS - A FORMIDABLE FORCE

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SMALL CALIBRE AMMUNITION

5.56 mm F1 BALL AMMUNITION

Consistent performance in varying temperature conditions



Australian Munitions' 5.56 mm F1 ball ammunition is designed for Superior performance with 5.56mm calibre weapons in particular the Austeyr currently in use with the Australian Defence Force. The projectile of the 5.56mm F1 ball Cartridge consists of a hardened steel penetrator and lead core, enclosed in a gilding metal jackets (SS109 style).

SPECIAL FEATURES

Our 5.56 mm F1 ball ammunition is manufactured at Australian Munitions' Benalla munitions facility and is currently in use with the Australian Defence Force (ADF) in the EF88 individual weapon and F89 Minimi light support weapon.

Australian Munitions' 5.56 mm F1 ball ammunition employs a specifically designed single base propellant with very low temperature coefficient of ballistics to ensure velocities and pressures remain consistent within variations in ammunition temperature.

The propellant has extreme clean burning characteristics and is an excellent replacement for those propellants that exhibit weapon fouling.



CHARACTERISTICS

Australian Munitions 5.56 mm F1 ball ammunition exhibits the following nominal performance characteristics:

Length of complete round	57.4 mm (Max)
Projectile construction	Hardened steel penetrator and lead core, enclosed in gilding metal jacket
Propellant type	Single base solvent propellant
Cartridge mass	12.0 g (Nominal)
Projectile mass	4.0 g (Nominal)
Chamber pressure Kistler 6215 transducer	<405 MPa (Avg)
Accuracy	Avg Std Dev < 100 mm in both horizontal and vertical planes @ 300 m
Muzzle energy	1,500 J (Min)
Temperature range	-54°C to 80°C

PACKAGING

Our 5.56 mm F1 ball ammunition can be supplied in the following standard packaging configurations:

- Plastic film pack (900 rounds per M2A1 container)
- Bandoleer/ charger clip pack (15 rounds per clip, 600 rounds per M2A1 container)
- Linked Pack F1 (200 rounds per belt, 800 rounds per M2A1 container)
- Linked Pack 4 Ball F1 1 Tracer M856 (200 rounds per belt, 800 rounds per M2A1 container).

The above mentioned configurations are packed in standard military package containers. Our 5.56 mm F1 ball ammunition will be shipped in packages conforming to the UN recommendations for packaging of dangerous goods. The packages are classified as Hazard Division 1.4S, UN Number 0012, Proper Shipping Name – Cartridges for Weapons, Small Arms.

Details of these packaging configurations can be supplied upon request.

SMALL CALIBRE AMMUNITION

5.56 mm F1A1 BALL AMMUNITION

Consistent performance in varying temperature conditions



Australian Munitions' 5.56 mm F1A1 ball ammunition is designed for superior performance with 5.56mm calibre weapons and provides consistent performance across an extreme temperature range while minimising visibility of the firing location during use. Australian Munitions 5.56mm F1A1 ball ammunition meets the essential design parameters of the NATO STANAG 4172. It can be used in all 5.56 Calibre NATO weapons and is comparable to other in service natures such as the FN SS109 and US M855 ball cartridges. The projectile consists of a hardened penetrator and a lead slug enclosed in a gilding metal jacket.

Tested weapons include EF88, F89 Minimi Light Machine Gun, M16A2 and M4A1 in accordance with the Multi Calibre Manual of Proof and Inspection Procedures.

SPECIAL FEATURES

Low muzzle flash and smoke to minimise visible signs of the firing location, when compared to other 5.56 mm ammunition, such as M855 rounds using double base propellant (WC844). This is achieved by matching the projectile with the right propellant formulation in order to achieve the required muzzle velocity, while minimising unburnt propellant before the projectile exits the barrel.



CHARACTERISTICS

Australian Munitions 5.56 mm F1A1 ball ammunition exhibits the following nominal performance characteristics:

Length of complete round	57.4 mm (Max)
Projectile construction	Hardened steel penetrator and lead core, enclosed in gilding metal jacket
Propellant type	Single base solvent propellant
Cartridge mass	12.0 g (Nominal)
Projectile mass	4.0 g (Nominal)
Chamber pressure Kistler 6215 transducer	<405 MPa (Avg)
Accuracy	Avg std dev < 100 mm in both horizontal and vertical planes @ 300 m
Muzzle energy	1,500 J (Min)
Temperature range	-54°C to 80°C

FUNCTION

Australian Munitions' 5.56 mm F1A1 ball ammunition offers superior reliability and performance in 5.56 mm calibre rifles in particular the 5.56 mm calibre EF88, Minimi CFNEF89, M16 A2 and M4 A1.

PACKAGING

Australian Munitions' 5.56 mm F1A1 ball ammunition can be supplied in the following standard packaging configurations:

- Plastic film pack (900 rounds per M2A1 container)
- Bandoleer/ charger clip pack (15 rounds per clip, 600 rounds per M2A1 container)
- Linked Pack F1A1 (200 rounds per belt, 800 rounds per M2A1 container)
- Linked Pack 4 Ball F1A1 Tracer M856 (200 rounds per belt, 800 rounds per M2A1 container).

These configurations are packed in standard military packaging, details of which can be supplied upon request. Our 5.56 mm F1A1 ball ammunition will be shipped in packages conforming to UN recommendations for packaging of dangerous goods. The packages are classified as Hazard Division 1.4S, UN Number 0012, Proper Shipping Name - Cartridges, Small Arms.

SMALL CALIBRE AMMUNITION

5.56 MM CLOSE TARGET ROUND (CTR)

Improved training outcomes



Australian Munitions 5.56 mm Ball Close Target Round (CTR) is designed for indoor and short range outdoor training use. The CTR will allow Australian Defence Force Tier 1 combatants and law enforcement operators to train with their operational weapons indoors, removing the requirement to train with alternative or modified weapons. The CTR also allows outdoor close quarter combat with no splash back and accurate target engagements to 100 m+.

SPECIAL FEATURES

Australian Munitions 5.56 mm CTR ammunition allows for use of unmodified service weapons for indoor training, while allowing outdoor CQB training with reduced safety templates and more realistic stand-off ranges to targets up to 100 m or more. The rounds are trajectory matched with in-service ammunition to ensure realistic shooting practice while offering improved training outcomes overall.

As this ammunition is lead free, users will not be exposed to toxic by-products as a result of primer combustion or projectile-target strike dust. The range stop butts will not be required to trap leaded projectiles and significant savings can be realised in associated health monitoring and environmental clean-up costs. (Note: 1 million rounds of conventional 5.56 mm ammunition fired on a range equates to 200-300 kgs of lead deposited in the environment)

Australian Munitions 5.56 mm CTR uses a lead-free copper-polymer frangible projectile consisting of ingredients that are compliant with the European Union's environmental regulations (REACH). In addition to the aforementioned cost savings, this ammunition will also reduce exposure of personnel to lead during storage, transportation, handling, use and clean up associated with all stages of product lifecycle.



CHARACTERISTICS

The CTR is fully functional in standard unmodified ADF and LE weapons platforms (no requirement for a training bolt)

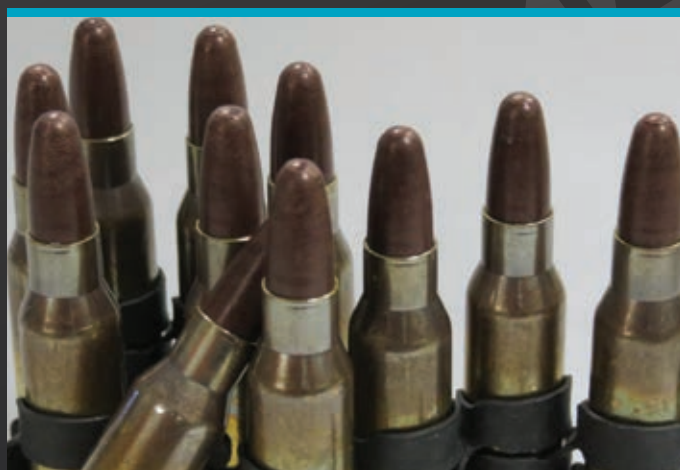
Cartridge components	Current in-service Cartridge 5.56 mm Ball F1	Cartridge 5.56 mm Ball CTR
Cartridge Case	F1 cartridge case	F1 cartridge case
Primer	Approved F1 primer, staked with primer pocket sealant	Primer, staked with primer pocket sealant
Propellant	AR2210 – CW adjusted to provide MV specified	AR2210 – CW adjusted to provide MV specified
Case mouth lacquer	Current F1 approved	Current F1 approved or NIL
Projectile	Current F1 Ball SS109-type	COTS fluted lead-free copper based frangible
Packaging	M2A1	M2A1
	Cart 5.56 mm Ball F1	Cart 5.56 mm Ball CTR
V24 (m/s)	~915 m/s	Tailored to match F1
Chamber pressure	<405 MPa max	<405 MPa max (~242 MPa recorded)
Port pressure	Sufficient to cycle 5.56 mm weapons suite	As above
Dispersion at 100 m Dispersion at 100 m	<3 MoA	<3 MoA
Mean point of impact relative to F1 at 100 m	N/A	<0.5 MoA (i.e. within <15 mm at 100 m)
Case dimensions	NATO MOPI compliant	NATO MOPI compliant

Australian Munitions 5.56 mm CTR is a member of the 5.56 mm family of ammunition. All family ammunition natures are manufactured at the Commonwealth owned Benalla and Mulwala factories using standardised components including the cartridge case, scalable propellants and common operating procedures and factory equipment. Each nature possesses a unique projectile, tailored to provide the exact flight and terminal ballistics required by the domestic counter terrorism and law enforcement operators. Use of common components and factory equipment minimises the unit price and maximises usage of the Commonwealth owned factories.

SMALL CALIBRE AMMUNITION

5.56 MM REDUCED RANGE TRAINING AMMUNITION (RRTA)

Improved training outcomes propellant and added safety



Australian Munitions 5.56 mm Ball Reduced Range Training Ammunition (RRTA) is trajectory matched to current in-service operational ammunition up to a range of 300 m or more. The RRTA offers no splash back and reduced ricochet – the frangible projectile turns to dust upon impact with hard surfaces such as metal targets and snail-trap bullet catchers.

SPECIAL FEATURES

The RRTA is a member of the 5.56 mm family of ammunition. All family ammunition natures are manufactured at the Commonwealth owned Benalla and Mulwala factories, using standardised components including the cartridge case, scalable propellants and common operating procedures and factory equipment. Each family ammunition nature possesses a unique projectile tailored to provide the exact flight and terminal ballistics required by the domestic counter terrorism and law enforcement operators. Use of common components and factory equipment minimises the unit price and maximises usage of the Commonwealth owned factories.

The RRTA uses a lead-free copper-polymer frangible projectile consisting of ingredients that are compliant with the European Union's environmental regulations (REACH). Introduction of these ammunition natures will mean significantly less lead exposure to personnel during the storage, transportation, handling, use and clean-up associated with all stages of the products lifecycle.



CHARACTERISTICS

The RRTA is fully functional in standard unmodified ADF and LE weapons platforms.

Cartridge components	Current in-service Cartridge 5.56 mm Ball F1	Cartridge 5.56 mm Ball CTR
Cartridge Case	F1 cartridge case	F1 cartridge case
Primer	Approved F1 primer, staked with primer pocket sealant	Primer, staked with primer pocket sealant
Propellant	AR2210 – CW adjusted to provide MV specified	AR2210 – CW adjusted to provide MV required for ballistic match
Case mouth lacquer	Current F1 approved	Current F1 approved or NIL (as required for desired training outcome)
Projectile	Current F1 Ball SS109-type	COTS fluted lead-free copper based frangible
	Cart 5.56 mm Ball F1	Cart 5.56 mm Ball CTR
V24 (m/s)	~915 m/s	Tailored to match F1
Chamber pressure	<405 MPa max	<405 MPa max (~242 MPa recorded)
Port pressure	Sufficient to cycle 5.56 mm weapons suite	As above
Dispersion at 100 m Dispersion at 100 m	<2 MoA	<1.3 MoA
Mean point of impact relative to F1 at 100 m	N/A	<1.0 MoA offset note: 1 MOA = ~27 mm
Case dimensions	NATO MOPI compliant	NATO MOPI compliant

SMALL CALIBRE AMMUNITION

5.56 mm F3 BLANK AMMUNITION

Superior performance with a clean burning propellant



Australian Munitions 5.56 mm F3 blank ammunition conforms to the design parameters of the Australian Defence Force (ADF). It is able to be used in all 5.56 mm calibre NATO weapons employing long nose blank ammunition fitted with the appropriate blank firing attachment.

Our 5.56 mm F3 blank ammunition is manufactured at our Benalla munitions facility and its performance is optimised for use by the ADF in the F88 Austeyr individual weapon and the F89 Minimi light support weapon.

SPECIAL FEATURES

Australian Munitions 5.56 mm F3 blank ammunition employs a specially designed single base propellant. The propellant is primarily nitrocellulose with added stabiliser and ballistic moderants. The propellant has extremely clean burning characteristics and is an excellent replacement for those propellants that exhibit weapon fouling. The propellant maintains excellent repeatability over the working temperature range. Our 5.56 mm F3 blank ammunition can be tailored to meet customer-specific requirements by modification of the propellant.

Australian Munitions long nose blank offers superior reliability and performance in F88 Austeyr.



CHARACTERISTICS

Australian Munitions 5.56 mm F3 blank ammunition exhibits the following nominal performance characteristics:

Length of complete round	55.5 mm (Max)
Cartridge weight	7.5 g
Propellant type	Single base solvent propellant

PACKAGING

Our 5.56 mm F3 blank ammunition can be supplied in the following standard packaging configurations:

- Loose pack (1,080 rounds per M2A1)
- Linked (200 rounds per belt)
- Plastic film pack (900 rounds per M2A1 container).

These configurations are packed in standard military package containers, details of which can be supplied upon request. Our 5.56 mm F3 blank ammunition will be shipped in packages conforming to the UN recommendations for packaging of dangerous goods. The packages are classified as Hazard Division 1.4S, UN Number 0014, Proper Shipping Name – Cartridges, Small Arms, Blank.



SMALL CALIBRE AMMUNITION

5.56 mm F3A1 BLACK BLANK AMMUNITION

Superior performance, clean burning propellant and added safety



Australian Munitions 5.56 mm F3A1 black blank ammunition conforms to the design parameters of the Australian Defence Force (ADF). It is able to be used in all 5.56 mm calibre NATO weapons employing long nose blank ammunition fitted with the appropriate blank firing attachment.

Australian Munitions 5.56 mm F3A1 black blank ammunition is manufactured at our Benalla munitions facility. It has been developed directly from the existing 5.56 mm F3 blank cartridge, but uses chemically treated brass to produce a 'blackened' case, thus providing a visual aid in distinguishing blank cartridges from live ammunition.

SPECIAL FEATURES

Australian Munitions 5.56 mm F3A1 black blank ammunition employs a specially designed single base propellant. This propellant is primarily nitrocellulose with added stabiliser and ballistic moderants. The propellant has extreme clean burning characteristics and is an excellent replacement for those propellants that exhibit weapon fouling. The propellant maintains excellent repeatability over the working temperature range. Our 5.56 mm F3A1 black blank ammunition can be tailored to meet customer-specific requirements by modification of the propellant.

Australian Munitions' long nose black blank offers superior reliability and performance in F88 Austeyr.



CHARACTERISTICS

Australian Munitions 5.56 mm F3A1 black blank ammunition exhibits the following nominal performance characteristics:

Length of complete round	55.5 mm (Max)
Cartridge weight	7.5 g
Propellant type	Single base solvent propellant
Cartridge colour	Black

FUNCTION

Australian Munitions 5.56 mm F3A1 black blank ammunition is optimised for use with the F88 Austeyr and the F89 Minimi currently in use with the ADF.

PACKAGING

Australian Munitions 5.56 mm F3A1 black blank ammunition can be supplied in the following standard packaging configurations:

- Plastic film pack (900 rounds per M2A1 container)
- Linked (200 rounds per belt)
- Loose pack (1,080 rounds per M2A1).

These configurations are packed in standard military package containers, details of which can be supplied upon request. Our 5.56 mm F3A1 black blank ammunition will be shipped in packages conforming to the UN recommendations for packaging of dangerous goods. The packages are classified as Hazard Division 1.4S, UN Number 0014, Proper Shipping Name – Cartridges, Small Arms, Blank.

SMALL CALIBRE AMMUNITION

5.56 mm F193 BALL AMMUNITION

Consistent performance in varying temperature conditions



The performance of the Australian Munitions 5.56 mm ball F193 ammunition is equivalent to M193 style cartridge. The projectile of the Australian Munitions 5.56 mm ball F193 consists of an alloyed lead/antimony core encased in a full gilding metal jacket.

Australian Munitions 5.56 mm ball F193 ammunition is manufactured at our Benalla munitions facility and its performance is optimised for use within the US 5.56mm calibre M16A1 rifle.

SPECIAL FEATURES

Australia Munitions 5.56 mm ball F193 ammunition employs a specially designed single base propellant. The propellant is primarily nitrocellulose with added stabiliser and ballistic moderants. The propellant has extremely clean burning characteristics and is an excellent replacement for those propellants that exhibit weapon fouling. The propellant maintains excellent repeatability over a working temperature range a feature we call 'Ballistic Temperature Independence'.

FUNCTION

Australian Munitions 5.56 mm ball F193 ammunition offers superior reliability and performance in the 5.56 mm calibre M16A1 rifle.



CHARACTERISTICS

Australia Munitions 5.56 mm ball F193 ammunition exhibits the following nominal performance characteristics:

Length of complete round	57.4 mm (Max)
Cartridge mass	11.9 g (Nominal)
Propellant	Single base propellant
Primer	Lead Styphnate base, boxer type
Projectile	Gilding Metal Envelope (FMJ) and Lead Core
Projectile mass	3.6 g (Nominal)

PACKAGING

Australia Munitions 5.56 mm ball F193 ammunition can be supplied in the following standard packaging configurations:

- BAM M2A1 containing 900 rounds in Plastic Film Pack (18 Plastic Film Packs/ M2A1, 50 Rounds/ Plastic Film Pack)
- Linked (200 rounds per belt).

These configurations are packed in standard military package containers, details of which can be supplied upon request. Our 5.56 mm ball F193 ammunition will be shipped in packages conforming to UN recommendations for packaging of dangerous goods. The packages are classified as Hazard Division 1.4S, UN Number 0012, Proper Shipping Name - Cartridges, Small Arms.



SMALL CALIBRE AMMUNITION

7.62 mm F4 BALL AMMUNITION

Consistent performance in varying temperature conditions



Australian Munitions 7.62 mm F4 ball ammunition is designed for superior performance with 7.62 mm calibre weapons and is equivalent to the US M80 style cartridge. The projectile of the cartridge consists of an alloyed lead/antimony core encased in a full gilding metal jacket.

Australian Munitions 7.62 mm F4 ball ammunition is manufactured at our Benalla munitions facility and its performance is optimised for use with:

- GPMG MAG 58 - 7.62 mm general purpose machine gun
- FN Minimi LMG - 7.62 mm light machine gun.

SPECIAL FEATURES

Australian Munitions 7.62 mm F4 ball ammunition employs a specially designed single base propellant. The propellant is primarily nitrocellulose with added stabiliser and ballistic moderants.

The propellant has extremely clean burning characteristics and is an excellent replacement for those propellants that exhibit weapon fouling. The propellant maintains excellent repeatability over a working temperature range a feature we call 'Ballistic Temperature Independence'.

FUNCTION

Our 7.62 mm F4 ball ammunition offers superior reliability and performance in 7.62 mm calibre rifles, in particular the 7.62 mm calibre GP MAG 58 machine gun and FN Minimi LMG.



CHARACTERISTICS

Australian Munitions 7.62 mm F4 ball ammunition exhibits the following nominal performance characteristics:

Length of complete round	71.1 mm (Max)
Cartridge mass	24.3 g (nominal)
Propellant	Single base propellant
Primer	Lead Styphnate base, boxer type
Projectile	Full Metal Jacket (Gilding metal and lead core construction)
Projectile mass	9.4 g (Nominal)

PACKAGING

Australian Munitions 7.62 mm F4 ball ammunition can be supplied in the following standard packaging configurations:

- BAM M19A1 containing 200 cartridges; 7.62 mm ball, F4 linked
- BAM M19A1 containing 200 cartridges; 7.62 mm ball, F4/1 tracer F62 mixed link.

These configurations are packed in standard military packaging, details of which can be supplied upon request. Our 7.62 mm F4 ball ammunition will be shipped in packages conforming to UN recommendations for packaging of dangerous goods. The packages are classified as Hazard Division 1.4S, UN Number 0014. Proper shipping name - Cartridges, Small Arms.

SMALL CALIBRE AMMUNITION

.50 CAL F3 BLANK AMMUNITION

Superior performance with clean burning propellant



Australian Munitions .50 cal F3 blank ammunition is manufactured at Australian Munitions' Benalla munitions facility and is currently in service with the Australian Defence Force (ADF). Australian Munitions .50 cal F3 blank ammunition conforms to the design parameters of NATO STANAG 4383.

SPECIAL FEATURES

Australian Munitions .50 cal F3 blank ammunition employs a specially designed double base propellant. This propellant is primarily nitrocellulose and nitroglycerine with added stabiliser, ballistic moderants and flash suppressant. The propellant has extremely clean burning characteristics and is an excellent replacement for those propellants that exhibit weapon fouling. The propellant maintains excellent repeatability over the working temperature range.

FUNCTION

Australian Munitions .50 cal F3 blank ammunition has been optimised to function with .50 calibre weapons in use by the ADF and fitted with an appropriate blank firing barrel and attachment.



CHARACTERISTICS

Australian Munitions .50 cal F3 blank ammunition exhibits the following nominal performance characteristics:

Length of complete round	99 mm (Max)
Cartridge weight	61.5 g (Nominal)
Propellant type	Double base solvent type
Temperature range	-15°C to 52°C

PACKAGING

Australian Munitions .50 cal F3 blank ammunition is supplied in the following standard packaging configuration:

- Linked blank – 100 linked rounds per M2A1 container.

This configuration is packed in standard military package containers. Details of this packaging configuration can be supplied upon request. Our .50 cal F3 blank ammunition is shipped in packages conforming to the UN recommendations for packaging of dangerous goods.

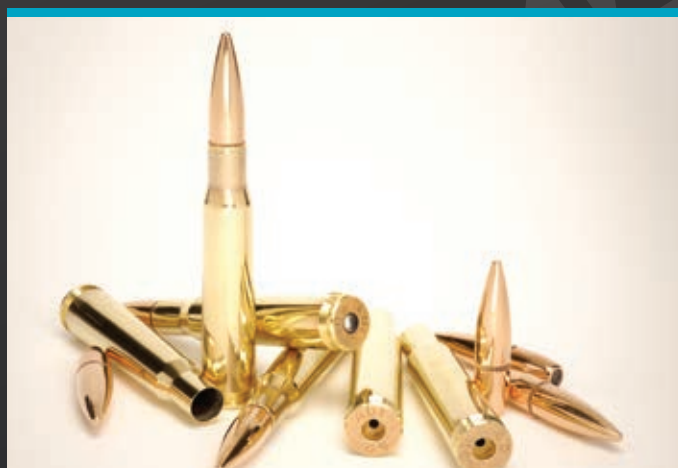
The packages are classified as Hazard Division 1.4C, UN Number 0338, Proper Shipping Name – Cartridges, Small Arms, Blank.



SMALL CALIBRE AMMUNITION

.50 CAL F1 BALL AMMUNITION

Consistent performance in varying temperature conditions



Australian Munitions .50 cal F1 ball ammunition conforms to the design parameters of NATO STANAG 4383 and has performance equivalent to the US M33 round. The projectile features a steel core enclosed in a gilding metal jacket.

.50 cal F1 ball ammunition is manufactured at Australian Munitions' Benalla munitions facility and is currently in service with the Australian Defence Force (ADF).

SPECIAL FEATURES

Australian Munitions .50 cal F1 ball ammunition employs a specially designed single base solvent type extruded granular powder in the form of single perforated tubules. The composition is primarily nitrocellulose with added stabiliser; ballistic moderants and flash suppressant. The propellant in our .50 cal F1 ball ammunition exhibits a very low temperature coefficient to ensure velocities and pressures do not vary greatly with changes in ambient temperature.

The powder also has extremely clean burning characteristics and is an excellent replacement for those powders that exhibit barrel fouling. The powder design ensures that the ammunition maintains excellent accuracy and repeatability over the working temperature range.

FUNCTION

Australian Munitions .50 cal F1 ball ammunition is optimised for use in all .50 calibre weapons currently in use by the ADF (M2HB-QCB or any other equivalent weapons).



CHARACTERISTICS

Australian Munitions .50 cal F1 ball ammunition exhibits the following nominal performance characteristics:

Length of complete round	138.43 mm (Max)
Projectile weight	42.9 g (Nominal)
Projectile velocity (V24)	897±9 m/s
Maximum chamber pressure	< 415 MPa (Avg)
Accuracy	Mean radius < 305 mm @ 550 m
Action time	0.004 s (Max)
Propellant type	Single base solvent type
Temperature range	-54°C to 80°C

PACKAGING

Australian Munitions .50 cal F1 ball ammunition can be supplied in the following standard packaging configurations:

- Linked ball: one linked belt of 100 rounds per M2A1 container
- Linked 4B1T (M17 tracer): one linked belt of 100 rounds per M2A1 container
- Loose pack: 10 rounds per inner box, 10 boxes per M2A1 container.

Our .50 cal F1 ball ammunition will be shipped in standard military packages conforming to the UN recommendations for packaging dangerous goods. The packages are classified as Hazard Division 1.4C, UN Number 0339, Proper Shipping Name – Cartridges for Weapons, Small Arms.

Details of the above mentioned packaging configurations can be supplied upon request.

MEDIUM CALIBRE

25 mm M793 TP-T (TARGET PRACTICE-TRACER) AMMUNITION

Consistent performance in varying
temperature conditions



Australian Munitions 25 mm M793 TP-T ammunition conforms to the design parameters of NATO STANAG 4173 and is ballistically matched to the M792 HEI-T and the GD-OTS MP-SD-T Mk2 cartridges. The cartridge consists of an inert projectile crimped into a steel cartridge case. The projectile consists of a hollow steel body, crimped nosepiece, iron driving band and consolidated tracer. The cartridge is filled with Australian Munitions propellant featuring Ballistic Temperature Independence.

The projectile is blue in colour and is inert except for the tracer. The projectile is used in training and gun system testing for the M242 25 mm automatic cannon.

Australian Munitions 25 mm M793 TP-T ammunition is manufactured at our Benalla munitions facility.

SPECIAL FEATURES

Australian Munitions 25 mm M793 TP-T ammunition employs a specially designed extruded propellant. The composition is primarily nitrocellulose with added stabiliser; ballistic moderants and flash suppressant. The propellant in our 25 mm M793 TP-T ammunition exhibits a very low temperature coefficient of ballistics to ensure that velocities and pressures do not change greatly with variations in ammunition temperature.



CHARACTERISTICS

Australian Munitions 25 mm M793 TP-T ammunition exhibits the following nominal performance characteristics:

Length of complete round	220 mm (Max)
Projectile weight	184 g
Muzzle velocity	1100 m/s
Propellant type	AR2220
Extreme temperature range	-54°C to 71°C

PACKAGING

Australian Munitions 25 mm M793 TP-T ammunition can be supplied in the following standard packaging configurations:

- Linked ball: two linked belts of 15 rounds per PA125 container.

Our 25 mm M793 TP-T ammunition will be shipped in standard military packaging conforming to the UN recommendations for transport of dangerous goods. The packages are classified as Hazard Division 1.2C, UN Number 0328, Proper Shipping Name – Cartridges for Weapons, Inert Projectile.

Details of the above mentioned packaging configurations can be supplied upon request.



MEDIUM CALIBRE

25 mm M910 TPDS-T (TARGET PRACTICE DISCARDING SABOT-TRACER) AMMUNITION



Australian Munitions 25 mm M910 TPDS-T ammunition conforms to the design parameters of NATO STANAG 4173 and is ballistically matched to the M919 APFSDS-T and M791 APDS-T cartridges. The cartridge consists of an inert projectile crimped into a steel cartridge case. The projectile consists of a steel, spin-stabilised sub-calibre core containing a consolidated tracer, a nylon discarding sabot with integral driving band and protective nose cap, and an aluminium alloy pusher plug.

The projectile is blue in colour and is inert except for the tracer. The projectile is used in training and gun system testing for the M242 25 mm automatic cannon.

Australian Munitions 25 mm M910 TPDS-T ammunition is assembled at our Benalla munitions facility.



CHARACTERISTICS

Australian Munitions 25 mm M910 TPDS-T ammunition exhibits the following nominal performance characteristics:

Length of complete round	223 mm (Max)
Projectile weight	97.4 g
Muzzle velocity	1535 m/s
Propellant type	Ball propellant

PACKAGING

Australian Munitions 25 mm M910 TPDS-T ammunition can be supplied in the following standard packaging configuration:

- Linked ball: two linked belts of 15 rounds per PA125 container.

Our 25 mm M910 TPDS-T ammunition will be shipped in standard military packages conforming to the UN recommendations for transport of dangerous goods. The packages are classified as Hazard Division 1.2C, UN Number 0328, Proper Shipping Name – Cartridges for Weapons, Inert Projectile.

Details of the above mentioned packaging configurations can be supplied upon request.



LARGE CALIBRE

105 mm HE M1 AMMUNITION

Proven consistent operational reliability



Australian Munitions 105 mm HE M1 ammunition conforms to the design parameters of the Australian Defence Force (ADF). Australian Munitions 105 mm HE M1 ammunition employs a forged steel projectile with a high explosive fill and a drawn brass case.

Australian Munitions 105 mm HE M1 is manufactured at our Benalla munitions facility and is currently in service with the ADF.

SPECIAL FEATURES

Australian Munitions 105 mm HE M1 ammunition utilises a flashless, non-hygroscopic propellant designed and manufactured to military specifications.

Additional characteristics of our 105 mm HE M1 ammunition include:

- Excellent ballistic uniformity for repeatable accuracy
- Reliable performance in extreme temperatures
- Superior long-term chemical and ballistic stability.

Australian Munitions 105 mm HE M1 ammunition can be supplied plugged or fuzed with third party fuzes upon request to meet customer requirements.



CHARACTERISTICS

Australian Munitions 105 mm HE M1 ammunition exhibits the following nominal performance characteristics:

Projectile weight	15 kg
Muzzle velocity	465 m/s
Range @ max charge	11,500 m
HE weight	2.3 kg
Propellant weight	1.24 kg

FUNCTION

Our 105 mm HE M1 ammunition is optimised for use by the ADF in 105 mm calibre in L1119 Hamel guns and the M2A2/M101 Howitzers.

PACKAGING

Australian Munitions 105 mm HE M1 is supplied in the following standard packaging configuration: 2 per F22 wooden box.

The packaging configuration is classified as Hazard Division 1.2E, UN Number 0321. Proper shipping name – Cartridges For Weapons.



LARGE CALIBRE

5"/54 NAVAL AMMUNITION

Proven consistent operational reliability



Australian Munitions 5"/54 naval ammunition conforms to the design parameters of the Australian Defence Force. Australian Munitions 5"/54 naval ammunition is manufactured at Australian Munitions' Benalla munitions facility and is currently in service with the Australian Defence Force (ADF).

SPECIAL FEATURES

Australian Munitions 5"/54 naval ammunition is designed for effective utilisation in 5"/54 naval weapon systems. The ammunition is intended primarily for employment against naval or surface targets, however, it may also be used in the anti-aircraft role. The ammunition is supplier plugged. Fuzes for the 5"/54 naval ammunition can be readily sourced from numerous manufacturers.

Australian Munitions 5"/54 naval ammunition employs a propelling charge that has extremely clean burning characteristics and is an excellent replacement for those powders that exhibit barrel fouling. The powder design ensures that the ammunition maintains excellent accuracy and repeatability over the working temperature range.

FUNCTION

Australian Munitions 5"/54 naval ammunition is optimised for use in 5"/54 naval gun systems employed by the ADF.

CHARACTERISTICS

Australian Munitions 5"/54 naval ammunition exhibits the following nominal performance characteristics:

Projectile length	546 mm
Projectile weight	30 kg
Projectile velocity @ 24 m from the muzzle	808 m/s @ +21 °C
Max chamber pressure	<380 MPa @ +21 °C
Range	24000 m
Propellant	BS NACO

PRODUCT RANGE

Australian Munitions 5"/54 naval ammunition product range consists of the following four items:

- Projectile 5"/54 HE plugged
- Projectile 5"/54 NF plugged
- Projectile 5"/54 ballistic inert
- Charge propelling 5"/54.

PACKAGING

Australian Munitions 81 mm HE M0221A1 is packaged in an individual M252 Fibreboard cylinder, packed three to an F8 wooden box and 36 boxes to a wooden pallet.

Proper shipping Name: Cartridges for Weapons

Hazard Classification: 1.2E.

GRENADES AND DEMOLITION STORES

HAND GRENADES

Ordnance-designed for operational effectiveness



Australian Munitions F1 fragmentation, F2 blast and F3 practice hand grenades have been developed to conform to the stringent design parameters of the Australian Defence Force (ADF). These hand grenades are manufactured at our Benalla munitions facility and are currently in service with the ADF.

PRODUCT RANGE

The F1 fragmentation hand grenade is a high explosive (HE), anti-personnel grenade. It is designed to produce a lethal radius of 6 m, a casualty radius of 15 m and a safety radius of 30 m.

The F2 blast grenade has an increased high explosive fill over that of the F1 fragmentation grenade. Designed for use within confined areas and Close Quarter Battle whilst increasing levels of safety for the user.

The F3 practice hand grenade is a training, non-fragmenting replica of the F1 fragmentation hand grenade. The Australian Munitions F3 practice hand grenade produces an acoustic and smoke signature to simulate the functioning of the F1 fragmentation hand grenade during training.

SPECIAL FEATURES

The F1 fragmentation hand grenade contains more than 4,000 steel balls arranged to achieve uniform distribution of lethal fragments through 360° upon functioning. The RDX-Wax filling is consistent and powerful.

CHARACTERISTICS

	F1 fragmentation grenade	F3 practice grenade	F2 blast grenade
Overall mass	375 g	340 g	225 g
Diameter/length	58/96 mm	58/100 mm	58/96 mm
Explosive mass/type	62 g (RDX/Wax)	0.5 g (flash composition)	110 g
Standard delay time	5 sec	5 sec	5 sec
Lethal radius	6 m	Not applicable	Not specified
Safety radius	30 m	Not applicable	Not specified
Fragments	>4,000 2.4 mm steel balls	No ejection of debris at 0.3 m	Limited
Temperature range:			
Storage/transportation:	-46°C - +71°C	-46°C - +71°C	-46°C - +71°C
Operational/training use:	-46°C - +63°C	-46°C - +63°C	-46°C - +63°C

A proven reliable primer and delay provides user confidence.

The F2 blast hand grenade contains RDX-based HE fill within a plastic body. This results in more predictable blast patterns and increased user safety.

The F3 practice hand grenade incorporates a high impact aluminium die cast body and hazard band with a distinctive appearance. The F3 practice hand grenade has a replaceable pyrotechnic fuze that displays an audible output and a distinct cloud of white smoke visible to 200 m to indicate functioning.

FUNCTION

The F1 fragmentation, F2 blast and the F3 practice hand grenades are optimised for use by the ADF.

PACKAGING

F1 fragmentation, F2 blast and F3 practice hand grenade fuzes will be shipped in standard military packages conforming to the UN recommendations for packaging of dangerous goods.

GRENADES AND DEMOLITION STORES

CHARGE, DEMOLITION

Designed for superior performance



SPECIAL FEATURES

Australian Munitions Charge, Demolition is in service with the Australian Defence Force. It has been designed to be deployed for use in combination with primer, 38 gram.

Australian Munitions Charge, Demolition is comprised of the following items:

- Thin walled plastic, rectangular box container with central cavity
- Cast RDX/ TNT (60/40% nominal by weight) composition fill
- End caps sealed with adhesive tape.

Each Charge, Demolition is packaged with a primer, 38 gram. The primer, 38 gram is intended to be initiated with detonator, Demolition F2 or detonator, Demolition, non-electric F1.

Our design, testing, manufacturing process of the assembled Charge, Demolition product ensure that the functions reliably when required.

FUNCTION

When correctly detonated, the Charge, Demolition will perforate a sharp sheared edge hole (at least of its own size) in 254 mm x 154 mm x 12 mm steel witness plate rather than bent perforation ensuring maximum effect.

CHARACTERISTICS

The assembled Charge, Demolition has the following nominal attributes:

Dimensions (H x L x W)	40 mm x 158 mm x 83.5 mm
Cavity depth	36.5 mm
Cavity diameter	32 mm
Total mass (maximum)	725 g
HE mass (NEQ)	620 g

PACKAGING

Australian Munitions Charge, Demolition, RDX/ TNT, 600 gram Mk5 can be supplied in the following standard configuration:

- BAM M2A1 (10 Charges, Demolition per pack).

This configuration is packed in standard military packaging, details of which can be supplied upon request. Australian Munitions Charge, Demolition, RDX/ TNT, 600 gram will be shipped in packages conforming to UN recommendations for packaging of dangerous goods. The packages are classified as 1.1D, UN Number 0048. Proper shipping name - Charge Demolition.

HIGH EXPLOSIVES

HIGH EXPLOSIVE PRODUCTS

Energetic materials for operational effectiveness



Australian Munitions high explosive products have been developed to conform to the stringent design parameters of the Australian Defence Force (ADF). Our high explosive products are manufactured at our Mulwala facility and are currently in service with the ADF, international defence forces and commercial customers.

Australian Munitions high explosive products provide the technological edge to the strategic energetic material requirements of the ADF. We also manufacture high quality energetic products for the commercial market.

FUNCTION

Australian Munitions high explosive products are optimised for use by the ADF.

EXPLOSIVE PRODUCT RANGE AND CHARACTERISTICS

Our high explosive product range exhibits the performance characteristics as detailed in the specifications listed in the table overleaf.

PACKAGING

Our high explosive products are shipped in standard military packages conforming to the UN recommendations for packaging of dangerous goods.

CHARACTERISTICS

Product	Current specifications	Type produced by Australian Munitions	Route specifications
TNT (continuous nitration)	DEF (AUST) 5367A	Type 1 flake (solidification pt 80.2 °C)	DEF STAN 07-4 (UK) MIL-T-248 (US) Type 1
RDX (Woolwich process)	DEF (AUST) 5382B	Grade A, Class 1 Grade B, Class 1 (boiled)	DEF STAN 07-23 (UK)
	MIL-DTL-398D (US) Type 1	Class 1, Type 1 Class 2, Type 1 Class 3, Type 1	MIL-DTL-398D
RDX / TNT 60/40	DEF (AUST) 5421A	Grade A, Type 1. Nominal viscosity 5 seconds Grade A, Type 2. Nominal viscosity 12 seconds Grade B (boiled and/or milled RDX)	CS 5446 (UK)
Composition A3	ADI-MUL (STAN) 43		MIL-C-44OC (US)
Composition TR1	APDC-TS-177		
PE4-MC	DEF (AUST) 4061		

HIGH EXPLOSIVES

RS-RDX

The reduced sensitivity (RS)
energetic solution



Australian Munitions RS-RDX has been developed by Australian Munitions to conform to the stringent design parameters of the Australian Defence Force (ADF). RS-RDX is manufactured at Australian Munitions' Mulwala facility via the Woolwich nitric acid process (Type 1) and is currently in-service with the ADF and international defence forces.

Further testing by the Defence and Science Technology Organisation (DSTO), an Australian Defence Department, has confirmed that Grade A RS-RDX used in PBXN-109 formulations has a marked reduction in shock sensitivity. RS-RDX satisfies all the chemical, physical and operational requirements of the relevant source specifications.

SPECIAL FEATURES

Australian Munitions RS-RDX provides the technological edge to the insensitive energetic material requirements of our customers.

ENHANCED PERSONNEL AND PLATFORM SURVIVABILITY

The benefits of using insensitive explosives to enhance personnel and platform survivability have been widely reported. As the worldwide requirements for insensitive explosives increases, Australian Munitions' insensitive RS-RDX is available to meet this growing demand.

CHARACTERISTICS

Australian Munitions RS-RDX exhibits the following nominal performance characteristics:

Product	RDX (Woolwich process) Type 1
Current specification	DEF (AUST) 5382B MIL-R-398(US) Type 1
Australian Munitions product	Grade A
	Grade B
	Grade E
	Class 1
	Class 3
Source specification	DEF STAN 07-23(UK) MIL- DTL-398 (US) Type 1
	NATO STANAG 4022
Pack size	15 kg pails

OPERATIONAL INSENSITIVE

Extensive testing, commissioned through the NATO MSIAC group, has confirmed that RS-RDX has equivalent insensitivity to that of SNPE "I-RDX" in PBX formulations. Substitution of RS-RDX in PBX formulations considerably reduces the shock sensitivity of these compositions without adversely affecting performance, chemical or physical characteristics.

Research to date has confirmed that Grade A RS-RDX used in PBXN-109 formulations has a marked reduction in shock sensitivity compared to the current formulation produced in Australia for the Penguin anti-ship missile using imported standard insensitive material.

FUNCTION

RS-RDX is optimised for use by the ADF.

PACKAGING

Australian Munitions RS-RDX can be shipped in standard military packages conforming to the UN recommendations for packaging of dangerous goods.

MILITARY PROPELLANTS

MILITARY PROPELLANTS

Consistent performance in varying temperature conditions



Australian Munitions propellants offer the highest standards in accuracy, reliability and repeatability under varying conditions.

Australian Munitions produces a wide range of military propellants, manufactured to the highest Australian and international standards. Our manufacturing facility is certified to ISO 9001.

The company has been the major supplier of products and services to the Australian Defence Force for many years.

CHARACTERISTICS

Australian Munitions is especially well equipped to respond to customers's specific requirements by modifying formulations to suit:

- Quality
- Documentation
- Reliability
- Delivery
- New ammunition developments.

Experience and expertise has made Australian Munitions a world leader in solvent type single-base extruded granular propellant technology. Our single-base propellants have excellent clean burning characteristics that minimise barrel fouling. They are designed to exhibit low temperature sensitivity with regard to ballistics and to maintain excellent accuracy and reliability over the extended working temperature range.

Australian Munitions' capabilities also extend to the manufacture of a large range of solvent type extruded double-base, triple-base granular and stick propellants.

All are subject to stringent inspection and testing to ensure uniformity and excellence.

Laboratory analysis and ageing tests are conducted routinely during production in laboratories registered by the National Association of Testing Authorities (NATA).

Some of Australian Munitions' military propellants in our comprehensive range are shown in the adjacent table.

These products are backed up by high quality after-sales service and advice from Australian Munitions' technical staff.

PRODUCT RANGE

Propellant	Calibre	Calibre detail
AR 2210	5.56 mm	M193/NATO SS109 and L110
AR 4005	5.56 mm/7.62 mm	Brass & plastic blank
AR 2206	7.62 mm	NATO ball/tracer
AR 2211	.50 cal	Ball
AR 2212	20 mm Phalanx and M55	Full and sub-calibre projectiles
AR 5401	30 mm DEFA	Air-to-air and Air-to-ground
FNH/P022	40 mm Q/F	For practice Mk6, practice Mk 1 and 1 A/T Mk4 and HE
AR2205	81 mm Mortar	Augmenting charges
NQ/M0.7	105 mm Tank	
NH.033	105 mm Tank L7	For L35A3 or L56A1
FNH.016	105 mm Howitzer M2 & M4	Zones 1-2 for M67, HE shell
FNH.025	105 mm Howitzer M2 & M4	Zones 3-4 for M67, HE shell
M1.034	105 mm Tank L7	HESH
M6.029	105 mm Tank L7	APPSDS
BS NACO(D)	5"/54 naval	
FNH/P038	155 mm Howitzer	Zones 3-7 for M4A2

PYROTECHNICS AND SIMULATORS

F3A1 HAND THROWN SIMULATOR

Designed for training excellence



Australian Munitions simulators provide effective training alternatives to maneuver and gunnery training opportunities. When used properly, simulations can create an environment similar to the stress of battle needed for effective command and battle staff training. Proper use of simulation helps commanders ensure quality battle training.

SPECIAL FEATURES

Australian Munitions Simulator F3A1 is a hand thrown simulator for use in training of military personnel (by the provision of battle noises) to simulate the acoustic effects of artillery and mortar fire. The Simulator F3A1 is intended for use in the open at a distance greater than 10 m from the human ear.

Australian Munitions Simulator F3A1 is designed for reliable and safe operation. The design is slim and compact and offers a cost-effective option to support training activities.

It has a simple one strike action for operation combined with safety design features such as reduced noise output (not exceeding 140 decibels), no omitting projectiles when fired, a 5 second safety delay and a descending frequency whistle.

CHARACTERISTICS

Australian Munitions F3A1 hand thrown simulator exhibits the following nominal performance characteristics:

Time from initiation to whistle function shall be not less than 3.5 seconds at -10°C, 21°C and 60°C and not more than 6 seconds at 21°C and 60°C or 7 seconds at -10°C.

Whistle duration shall be not less than 3 seconds at -10°C, 21°C and 60°C and not greater than 6.5 seconds at 21°C and 60°C or greater than 7 seconds at -10°C.

FUNCTION

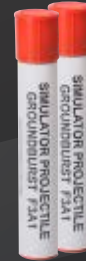
Our Simulator F3A1 is functioned by use of a moisture resistant friction surface - match head system assembly. The sealing cap is removed and its match friction disc is drawn sharply over the match head composition, thus igniting the safety fuze. As soon as the composition begins to burn, the simulator is thrown. After a nominal delay (typically four seconds) the match head plug/safety fuze assembly is expelled on commencement of ignition of the whistle composition. The whistle composition causes a high frequency tone of decreasing pitch to be emitted for a nominal duration of six (6) seconds. The whistle composition, in turn, ignites the bursting charge causing it to rupture its containment producing a sharp audible report and a compact, white smoke cloud.

PACKAGING

Australian Munitions Simulator, Projectile Groundburst, F3A1 can be supplied in the following standard configuration:

- BAM M2A1 (60 F3A1 per pack).

Australian Munitions Simulator, Projectile Groundburst, F3A1 will be shipped in packages conforming to UN recommendations for packaging of dangerous goods. The packages are classified as 1.4S, UN Number 0432. Proper shipping name - Simulator, Projectile Groundburst, F3A1.



PYROTECHNICS AND SIMULATORS

DIVER RECALL DEVICE

For peace of mind above and below the water



Australian Munitions Diver Recall Device is a revolutionary training and operational tool to maintain communication with divers engaging in dangerous and vulnerable operations.

SPECIAL FEATURES

Australian Munitions Diver Recall Device is designed specifically for signalling a submerged diver. The device emits an alert sound to personnel at 145 - 156 dB which is audible to the human ear underwater. The Diver Recall Device is designed for reliable and safe operations of personnel in potentially dangerous and unpredictable environments where normal communication is compromised.

The design is slim and compact and offers a cost-effective option to support training, search and rescue and operational activities. It has a simple one strike action for operation combined with safety design features such as controlled noise output (not exceeding 156 decibels), no emitting projectiles when fired, a 5 second safety delay and is lead free. Australian Munitions Diver Recall Device is a revolutionary underwater signalling and emergency response tool keeping the lines of communication open between divers and operators.



CHARACTERISTICS

Australian Munitions Diver Recall Device exhibits the following nominal performance characteristics:

Time from initiation to audible sound when functioned under water is typically between 5 and 8 seconds. The Diver Recall Device is designed to produce a peak sound pressure level between 145 - 156 dB when measured from a distance of 10 m in air.

The device is designed to operate in the temperature range between -10°C to + 60°C and in conditions of 100% humidity.

FUNCTION

Our Diver Recall Device is functioned by use of a moisture resistant friction surface - match head system assembly. The sealing cap is removed and its match friction disc is drawn sharply over the match head composition, thus igniting the safety fuze. As soon as the composition begins to burn, the Diver Recall Device is dropped into water. After a nominal delay (in between 5-8 seconds) the safety fuze ignites the payload causing it to rupture its containment and produce the audible sound when functioned underwater.

PACKAGING

Australian Munitions Diver Recall Device standard packaging configuration is 60 per M2A1 container, maximum 84 containers per standard pallet (1100 mm x 1100 mm).

Australian Munitions Diver Recall Device will be shipped in packages conforming to UN recommendations for packaging of dangerous goods. The packages are classified as 1.4G, UN Number 0431. Proper shipping name – ARTICLES, PYROTECHNIC for technical purposes.

BOMBS

BDU-33 PRACTICE BOMB

Effective ordnance for precision simulations



Australian Munitions BDU-33 practice bomb and F2 spotting charge conform to the safety and operations parameters of the Australian Defence Force (ADF) and are used to simulate MK 82 and MK 84 bombs in low drag configurations. The BDU-33 is manufactured at Australian Munitions' Benalla munitions facility.

Australian Munitions BDU-33 practice bombs can be loaded onto triple ejector racks and suspension units, and are easily transported to and from the aircraft on loading trailers.

SPECIAL FEATURES

Australian Munitions BDU-33 practice bombs are 575 mm long and weigh 25-pounds. They accurately simulate larger and heavier live bombs by their tail fin guidance system. When loaded in place, underneath the aircraft initially, the BDU-33 bomb is pushed against a spring-loaded catch and locked into place.

Australian Munitions BDU-33 practice bombs can be unloaded from the aircraft by loosening the bolts and releasing the spring.

Australian Munitions BDU-33 practice bombs also feature the F2 spotting charge. This unique spotting charge releases a distinct flash and white cloud on impact, allowing spotters to gauge the effectiveness of the bombing run in night or daylight training.

The spotting charges are designed to fit into the nose cone of the practice bomb and once the arming pin is released, will detonate on impact.



CHARACTERISTICS

Australian Munitions practice bomb product range consists of the following four items:

Bomb practice BDU-33 C/B (Aust) 25 lb

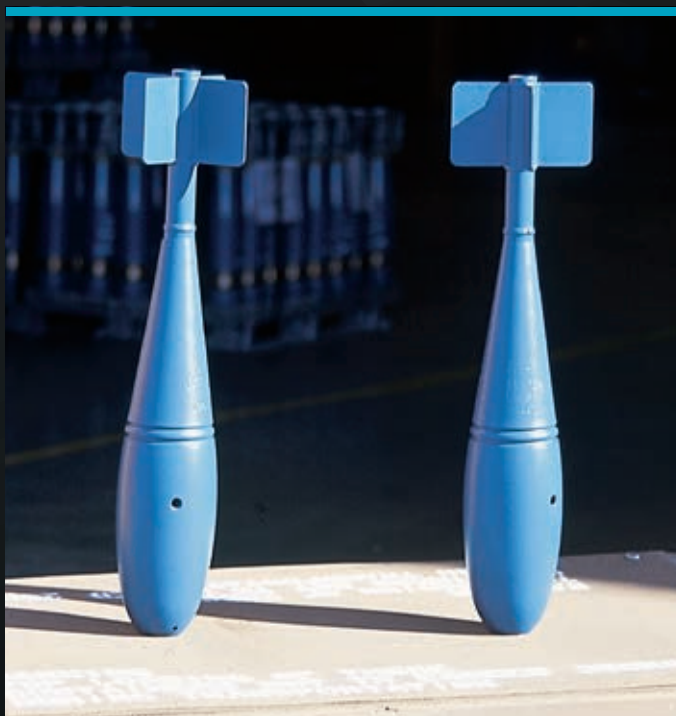
Bomb practice 5 kg

Charge spotting bomb F2

Firing pin

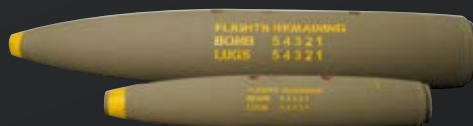
PACKAGING

Australian Munitions BDU-33 practice bombs can be supplied in the following standard packaging configuration: Re-usable containers – each container houses 45 units and is clearly marked and identifiable.



BOMBS

MK82 AND MK84 BOMBS HIGH EXPLOSIVE AND PRACTICE Designed for superior performance



CHARACTERISTICS

- MK 82 is 500 lbs packaged as six units in a dedicated welded steel pallet
- MK 84 is 2000 lbs packaged as two units in a dedicated welded steel pallet.



Australian Munitions uses a specially formulated High Explosive Substitute (HES) fill in the manufacture of practice bombs. The HES fill consists of castor oil, rosin, red oxide and plaster of paris mixed together in a heat vessel and filled in a manner similar to an actual explosive fill. As practice ordnance fill, it is far superior to concrete.

SPECIAL FEATURES

These aircraft bombs have very close tolerances on overall weight due to precise control of the density of the HES mix.

The centre of gravity of the fill can be controlled, making bombs filled with our HES suitable for use with guidance kits. This is not possible with concrete due to settling of the aggregate during cure.

Batch to batch control of the HES mix is very precise, so that variation in weights and centre of gravity from one batch to the next are minimal.

HES have a significant environmental advantage over concrete. For disposal, the HES can be melted out of the bomb bodies, making it possible to dispose of the bodies as scrap metal. The ingredients of the HES fill are non-hazardous.



COMMERCIAL POWDERS AND AMMUNITION

AUSTRALIAN OUTBACK AMMUNITION

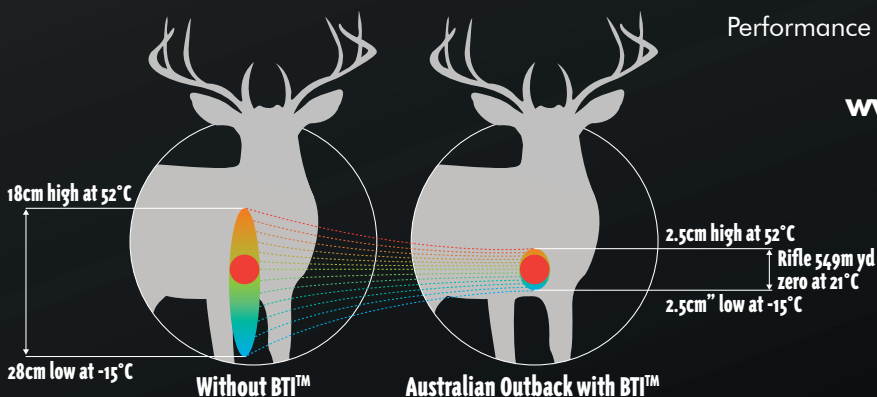
Extreme performance whatever the weather



This line of ammunition has been developed to provide extreme performance in the most inhospitable environments on earth. From the heat and humidity of inland swamps to the snow and ice of the tallest peaks, Australian Outback's consistent performance and quality will never let you down. Whether you're after small game, large game or are an avid target shooter we have a round to suit.

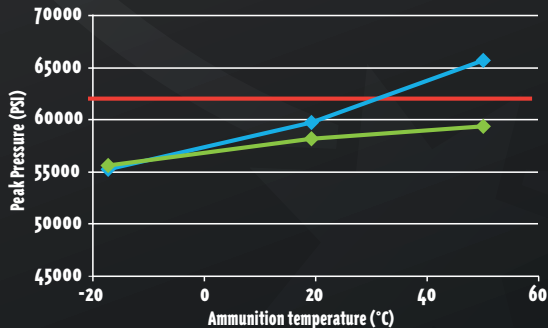
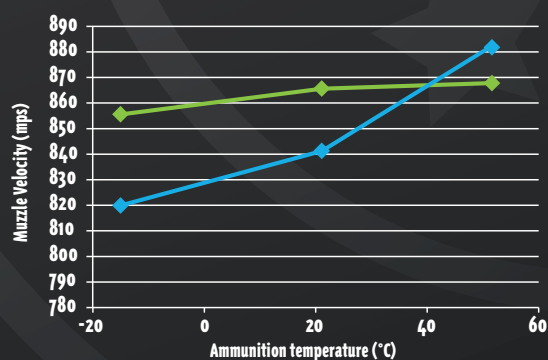
BALLISTIC TEMPERATURE INDEPENDENCE (BTI)

We have developed a new line of ammunition that leaves your barrel at the same high velocity at extreme temperature ranges. No matter if it's scorching hot or freezing cold, Australian Outback ammunition delivers consistent extreme high velocity and ultra-reliability you demand in all shooting circumstances. For the technically minded, it's called Ballistic Temperature Independence (BTI). But all you really need to know is Australian Outback ammunition will never let you down.



PERFORMANCE

Cartridge type	Muzzle velocity
223 REM 55gr Sierra BlitzKing	995 mps
223 REM 69gr Sierra HPBT MatchKing	902 mps
308 WIN 165gr Sierra SBT GameKing	866 mps
308 WIN 168gr Sierra HPBT MatchKing	851 mps
308 WIN 150gr Swift Scirocco II BTS	870 mps



◆ Australian Outback 165gr GameKing
— SAAMI Maximum Average Pressure
◆ Typical Premium Competitor

AUSTRALIAN OUTBACK AMMUNITION PROVIDES:

BTI propellant which provides consistent performance across extreme temperature ranges.

Considerable velocity gains over other factory ammunition. Performance you can rely on.

www.outbackammo.com.au

COMMERCIAL POWDERS AND AMMUNITION

.308 WIN - 150gr Swift Scirocco II BTS

Scirocco II bonded is the perfect bullet design for today's fast, flat-shooting, long-range cartridges. Its secant ogive, 15-degree boat tail base and Signature Black Tip™ create a sleek, aerodynamic profile that helps maintain down-range velocities and flat trajectories.

The extra heavy tapering jacket wall with an internally bonded lead core provides structural integrity, reliable expansion and penetration with 80%+ weight retention.

Swift
BULLET COMPANY



Ammunition Temperature (°C)	Muzzle Velocity (mps)
-15	859
21	870
52	870



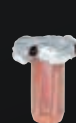
.308-180 Grain
2.5x expansion



534 mps
.490 Dia.
99% Wt.Ret



640 mps
.650 Dia.
99% Wt.Ret



701 mps
.675 Dia.
97% Wt.Ret



762 mps
.695 Dia.
96% Wt.Ret

RECOMMENDED GAME



DEER



BUFFALO



CAMEL



823 mps
.705 Dia.
95% Wt.Ret



914 mps
.710 Dia.
84% Wt.Ret



1006 mps
.711 Dia.
87% Wt.Ret



1013 mps
.815 Dia.
80% Wt.Ret

.308 WIN - 165gr Sierra SBT GameKing



Ammunition Temperature (°C)	Muzzle Velocity (mps)
-15	856
21	866
52	868

GameKing® bullets are designed for hunting at long range, where their extra margin of performance can make the critical difference. GameKing® bullets feature a boat tail design to bring hunters the ballistic advantage of match bullets.

RECOMMENDED GAME



FERAL PIG



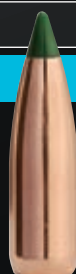
DEER



BUFFALO

SIERRA
The Bulletsmiths®

.223 REM - 55gr Sierra BlitzKing



Ammunition Temperature (°C)	Muzzle Velocity (mps)
-15	976
21	995
52	1001

Varmint hunting places extreme demands on bullet performance. Such bullets must be exceptionally accurate to hit small targets, lightly constructed to provide explosive expansion while minimizing ricochets, and lightweight to obtain high velocities with flat trajectories. Sierra BlitzKing® bullets are the standard against which other brands are measured.

RECOMMENDED GAME



RABBIT



FOX



COYOTE

SIERRA
The Bulletsmiths®

.223 REM - 69gr Sierra HPBT MatchKing



Ammunition Temperature (°C)	Muzzle Velocity (mps)
-15	887
21	902
52	905

RECOMMENDED FOR COMPETITIVE SHOOTING.

The hollow point boat tail design provides that extra margin of ballistic performance match shooters need to fire at long ranges under adverse conditions.

SIERRA
The Bulletsmiths®

.308 WIN - 168gr Sierra HPBT MatchKing



Ammunition Temperature (°C)	Muzzle Velocity (mps)
-15	842
21	851
52	852

RECOMMENDED FOR COMPETITIVE SHOOTING.

For serious rifle competition, you'll be in championship company with MatchKing® bullets. Our exacting tolerances assure record-breaking accuracy you can depend on.

SIERRA
The Bulletsmiths®





E-mail: info@australian-munitions.com.au
 Web: www.australian-munitions.com.au
 Australian Munitions ABN 66 008 642 751