

Australian Standard™

**Explosives—Storage, transport
and use**

Part 0: Terminology

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Part 0: Terminology

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PREFACE

This Standard was prepared by Standards Australia Committee CE/5, Explosives, to supersede AS 2189—1983, *Explosives—Glossary of terms*.

This Standard is one of a series dealing with explosives and pyrotechnics. To date the series consists of the following:

AS

2187 Explosives—Storage, transport and use

2187.0 Part 0: Terminology (this Standard)

2187.1 Part 1: Storage

2187.2 Part 2: Use of explosives

2187.4 Part 4: Pyrotechnics—Outdoor displays

It is proposed to publish a further three parts, consisting of the following:

Use of explosives

Pyrotechnics—Indoor theatrical and film sets

Pyrotechnics—Marine distress signals

Pyrotechnics—Shop goods fireworks

The objective of this Standard is to provide definitions for terms referred to in the AS 2187 series of Standards and those commonly used in the explosives and pyrotechnic industries.

Documents referred to in this Standard are listed in Appendix A.

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STANDARDS AUSTRALIA

Australian Standard

Explosives—Storage, transport and use

Part 0: Terminology

Term	Definition
acoustic warning (or sound signal or warning signal)	A distinctive audible warning, used to indicate the progress of blasting operations to persons who may be affected by the noise, air blast or vibration.
advance	The distance an excavation progresses in a tunnel drive following the firing of a round of explosives.
aerial display, high	A rocket or mortar launched pyrotechnic device which rises to a height greater than 70 m in a vertical plane above the point of launch.
aerial display, low	A rocket or mortar launched pyrotechnic device which rises to a height less than 70 m in a vertical plane above the point of launch.
aerial shell (or shell)	A firework which is designed to burst high in the air and is projected from a mortar by a lifting charge. Aerial shells are typically cylindrical or spherical canisters containing pyrotechnic or novelty effects with an internal explosive charge intended to break the shell. Attached to the base of each shell is a lift charge consisting of a propellant primed with a length of quick-match fuse, an electric igniter or green safety fuse. Aerial shells may contain stars, comets, serpents, crackers, streamers or other effects.
air blast	A shock wave generated by an explosion and transmitted through the air.
air concussion	<i>See</i> air blast
ALANFO	A mixture of ANFO and aluminium powder.
AN	Ammonium nitrate.
ANFO	A mixture of ammonium nitrate and fuel oil with or without a dye colouring agent.
ANFO charger	<i>See</i> ANFO loader
ANFO loader	Pneumatic equipment consisting of a container or pressure vessel and semiconducting charging hose used to place ANFO in drill holes.

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Term	Definition
appropriate authority	<i>See</i> regulatory authority
approved	Approval by the regulatory authority having jurisdiction.
assistant	A person nominated by the operator to assist in the handling of fireworks. NOTE: The duties do not normally include crowd control.
associated works	Other magazines, process buildings and storages of energetic materials, e.g. ammonium nitrate or Class 5 dangerous goods.
authorized person	The person authorized by the regulatory authority having jurisdiction, or authorized by management to carry out a particular duty.
back break (or over break)	Ground broken beyond the design line of blast holes most recently detonated.
barrage	A rapidly fired sequence of aerial shells including bombardos which are chain fused together for ignition.
base charge (or bottom charge)	The charge loaded into the bottom of a drill hole or blast hole.
bell wire	<i>See</i> connecting wire
black powder (or gun powder)	A dry explosive consisting generally of potassium nitrate or sodium nitrate, charcoal and sulfur, which under normal conditions deflagrates rather than detonates NOTE: It has a relatively low energy output and is classified as a low explosive (UN0027 and 0028, Classification Code 1.1D).
blast hole (or shot hole)	A hole which is charged with explosives for blasting purposes.
blasting (or shot firing or shooting)	The firing of explosive charges.
blasting agents	Certain high explosives, such as those consisting primarily of ammonium nitrate, in which none of the ingredients are classified as an explosive and which normally require a booster for initiation.
blasting cap	<i>See</i> detonator
blasting explosive (or high explosive)	An explosive which contributes the majority of the work in an explosion and is used for blasting in mining, quarrying and excavations generally.
blasting machine	<i>See</i> exploder

Term	Definition
blasting mat	A mat made of rope, rubber strips, polyethylene tube or similar material, placed over the area or materials being blasted to prevent the scattering of blast-generated debris.
blasting powder	<i>See</i> black powder
blister shooting (or mud capping or plaster shooting)	The breaking of rocks or other materials by firing charges that have been placed against them and that have been confined by mud or clay.
blowpipe	A pipe which is connected to an air hose or a water hose, or both, to clean out blast holes before charging or to remove stemming material in the event of a misfire.
bombardos	Aerial shells not more than 50 mm in diameter which are chain fused together for firing in a barrage.
booster	A cap-sensitive explosive with a high VOD used generally in small quantities to rapidly attain and maintain a high rate of detonation through the main charge.
boot leg	<i>See</i> butt
bore hole	<i>See</i> drill hole
bottom charge	<i>See</i> base charge
box cut (or sinking cut)	A pattern of holes adopted for blasting to a new level below an existing floor or below existing surface mining.
branch line	A length of detonating cord or signal tube running between, and connected to, the trunkline and the primer.
brisance	The ability of an explosive to break or shatter rock by shock or impact as distinct from gas pressure.
bulk strength	The explosive strength value of a unit volume of an explosive material expressed against a standard reference such as ANFO (see also mass strength).
bulled hole	A blast hole which has been enlarged (chambered) to accommodate extra explosive over a portion of its length (usually at the bottom) by exploding a small charge.
bulling (or chambering or springing)	A procedure intended to enlarge a section of a blast hole (usually the bottom) in order to accommodate extra explosive over that section.
burden (or face burden)	The distance from the charge to the nearest free face.

Term	Definition
burn cut (or cut hole or shatter cut)	Holes drilled to provide the initial cut or void into which other holes can break and thereby form a face.
bus wire	Bare copper or aluminium wires fixed to insulators across the face, to which detonator wires are connected in parallel.
butt (or boot leg or socket)	Any portion of a drill hole or blast hole left after blasting. NOTE: It could contain some unexploded material.
candle (or Roman candle)	A pyrotechnic device consisting of a single tube containing alternate propellant and pyrotechnic units which eject the pyrotechnic units into the air and which may emit showers of sparks between each shot.
cap	<i>See</i> detonator
cap sensitive (or detonator sensitive)	A term applied to any explosive which can be reliably initiated in the unconfined state by a No. 8 detonator.
capped fuse (or rod or tail or tape)	A length of safety fuse with a detonator crimped onto one end.
capping station (or rod room)	A special location used exclusively for preparing capped fuses.
carry box	<i>See</i> day box
cartridge (or plug or stick)	A preformed unit of high explosive enclosed in a material such as paper or plastic of a predetermined diameter and length.
chambering	<i>See</i> bulling
charge	(a) A quantity of explosive. (b) Explosive placed in a drill hole or confined space.
charging (or loading)	The act of placing explosives in the desired position for firing.
charging density	The mass of explosive in kilograms per linear metre charged in a blast hole of a given diameter.
charging hose (or loading tube)	A plastic hose or non-ferrous pipe used to facilitate the placing of explosives into the blast hole.
circuit	The wiring connecting electric detonators to each other.
circuit tester (or galvanometer or ohmmeter)	An electrical instrument, as specified in AS 2187.2, for testing a firing circuit involving electric detonators or the components thereof, or both.

Term	Definition
class	One of the nine classes into which dangerous goods are subdivided in accordance with AS 1216, the <i>Australian Dangerous Goods Code</i> or the <i>Australian Code for the Transport of Explosives by Road and Rail</i> (known as the AE Code).
classification	The separation of dangerous goods into classes and divisions according to their hazard characteristics.
classification code (or hazard classification)	A statement of the class, division and compatibility group to which an explosive has been assigned in accordance with the <i>Australian Code for the Transport of Explosives by Road and Rail</i> (known as the AE Code).
clay cock	<i>See</i> dummy
cleanwall blasting	<i>See</i> perimeter blasting
cookie	<i>See</i> dummy
collar	The ground immediately surrounding the opening of a drill hole.
collar burster	<i>See</i> stab hole
column charging	The charging of a drill hole with a continuous charge.
combination	<i>See</i> multishot box item
combustible	A material deemed combustible when tested in accordance with AS 1530.1.
comet	A pyrotechnic effect which burns, producing light, sparks, sound or smoke with or without self-propulsion or an explosive charge. Comets may be fired either individually or in multiples from a mortar or tube.
compatibility group (or group)	Those groups of explosives which can be stowed or carried together without significantly increasing either the probability of an accident or, for a given quantity, the magnitude of the effects of such an accident. On this criterion, explosives have been divided into a number of compatibility groups, each denoted by a code letter from A to L (excluding I), N and S. (For further information see the <i>Australian Dangerous Goods Code</i> or the <i>Australian Code for the Transport of Explosives by Road and Rail</i> .)
competent person	A person who has acquired through training, qualification, experience or a combination of these, the knowledge and skill enabling that person to correctly perform the task.
connecting wire (or bell wire)	Insulated wires (usually of a lighter gauge than the firing cables) used between the detonator lead wires and the firing cables or for lengthening the lead wire of an electric detonator.

Term	Definition
coyote blasting (or heading blasting or tunnel blasting)	A method of large-scale blasting in which explosives are loaded into tunnels excavated into and behind a high face.
cracker (or fire cracker)	A tube of rolled paper fitted with a wick, designed to explode with a single sharp report.
crimper	A special hand tool or bench-mounted tool used for crimping a detonator onto a length of safety fuse.
crimping pliers	<i>See</i> crimper
crimping tool	<i>See</i> crimper
cushion blasting	<i>See</i> perimeter blasting
cut	An opening made in a face to provide a free face for blasting, or for the removal of a whole face.
cut hole	<i>See</i> burn cut
cut off	A form of misfire in which some explosive is left undetonated as a result of an adjacent explosion, e.g. separation of charge by ground movement or severance of the initiating line.
cut off hole	<i>See</i> cut off
cutting charge	A charge of explosive applied to the outside of an object with the aim of cutting or shearing it off.
day box (or carry box or expense box or fracture tin)	A container used at the work site for holding daily requirements of explosives.
deck charge	Charges placed above a base charge at preselected intervals and which are completely separated from the base charge and each other.
deck charging (or deck loading)	Method of charging involving deck charges.
delay detonator	A detonator which contains a delay device designed to fire at a fixed interval after ignition.
delay relay (or relay)	A device incorporating a detonator delay arrangement used with detonating cord.
detonating cord	A flexible cord with a solid core of high explosives.

Term	Definition
detonation	An explosive process of very high speed involving a sustained shock wave.
detonation wave	The shock wave set up by detonation.
detonator (or blasting cap or cap)	A capsule or case which contains an explosive of high sensitivity used for initiating other explosives.
detonator sensitive	<i>See</i> cap sensitive
display firework	Any firework intended for use in outdoor displays; usually, does not include distress signals, model rocket motors, toy fireworks and shop goods fireworks.
display site	The immediate area of a fireworks display and the area under the direct control of the operator. This includes the point of launch, fall-out area and required minimum safety distance from viewing areas and protected works.
division (or hazard division or subclass)	<p>One of the six divisions into which explosives are subdivided as follows:</p> <p>Division 1.1 Substances and articles which have a mass explosion hazard.</p> <p>Division 1.2 Substances and articles which have a projection hazard but not a mass explosion hazard.</p> <p>Division 1.3 Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard, or both, but not a mass explosion hazard.</p> <p>Division 1.4 Substances and articles which present no significant hazard.</p> <p>Division 1.5 Very insensitive substances which have a mass explosion hazard.</p> <p>Division 1.6 Articles containing extremely insensitive explosives.</p> <p>NOTE: For a complete evaluation of these divisions see AS 1216.</p>
down line	A line of detonating cord or signal tube by which a primer is lowered into a blast hole and which is the means of initiating an explosive charge.
drill hole (or bore hole or hole)	A hole prepared for the insertion of an explosive charge.
dummy (or clay block or cockie)	A clay plug used for stemming.
dummy primer	<i>See</i> inert primer

Term	Definition
earth leakage	The loss of current to earth from any electrical circuit by unintended means.
easer hole	<i>See</i> easer
easer	A hole drilled in a face next to the cut and fired after the cut has been fired.
electric cap	<i>See</i> electric detonator
electric detonator	A detonator having electrical means of initiation.
electric firing	The initiation of explosive charges by means of electric detonators.
electric igniter (or fuse head or squib or match head detonator)	A device containing a pyrotechnic composition which is initiated electrically.
electric lighter	<i>See</i> electric igniter
elevated display	A pyrotechnic display involving the above-ground launch of pyrotechnic devices from buildings or structures.
embedded electric detonator	<i>See</i> inert primer
Emergency Procedure Guides (EPGs)	As defined in the <i>Australian Code for the Transport of Explosives by Road and Rail</i> (known as the AEC Code).
emulsion explosive	Explosives consisting of droplets of a saturated aqueous solution containing oxidizing salts, suspended in an oil/wax matrix, and other additives. They can be either cap or non-cap sensitive, depending on their composition.
exothermic reaction	A chemical reaction which is accompanied by liberation of heat.
expense box	<i>See</i> day box
exploder (or blasting machine)	A portable apparatus, as specified in AS 2187.2, which provides a given output of electrical energy to energize a circuit that will initiate an explosion.
explosive	Any material or mixture of materials which, when initiated, undergoes a rapid chemical change with the development of heat and high pressure to produce an aural, visual or practical effect.
explosive strength	The strength of an explosive expressed against a standard reference, e.g. ANFO.

Term	Definition
extraneous electricity	An unintended electrical current from a source other than the firing device which could initiate a detonator including stray currents, induced currents, static electricity and radiofrequency energy.
external portable magazine	<i>See</i> magazine
exudation	A condition evidenced by the appearance of oily globules of nitroglycerine or other explosive liquid on the inside or outside of a cartridge wrapper. NOTE: Explosives in this condition are considered too dangerous for use.
face	A wall of rock, generally vertical, either naturally formed or developed by blasting.
face burden	<i>See</i> burden
fall-out area	An area set aside by the operator, taking into account weather conditions at the time of the pyrotechnic display, where debris and aerial misfires are expected to fall.
fan blasting	<i>See</i> ring blasting
firecracker	<i>See</i> cracker
firework	A pyrotechnic device containing explosive composition which upon functioning will burn or explode, or both, to produce a visual effect or aural effect, or both, and which is intended as a form of entertainment.
firing	The act of initiating explosives.
firing cable (or shot fired lead)	Insulated wires used to connect the connecting wires or the lead wires of detonators to be fired to the source of energy to be used.
firing circuit	Electrical circuit, which may be simple series, simple parallel, reverse parallel, series-in-parallel, or parallel-in-series, obtained by connecting detonator lead wires in the appropriate ways to initiate explosive charges.
firing sequence (or rotational firing or sequence firing)	The firing of charges in a predetermined order.
fixed magazine	<i>See</i> permanent magazine
flashover	<i>See</i> sympathetic detonation

Term	Definition
flash powder	A pyrotechnic substance contained in salutes and other pyrotechnic devices which explodes with a brilliant flash of light and loud sound, and includes photoflash powder (UN0094, Classification Code 1.1G and UN0305 Classification Code 1.3G), but excludes gun powder.
fly-rock	Material thrown beyond the blast site by a blast.
fountain	A firework which is designed to project sparks or burning glitter, but not stars, comets or crackers, into the air. NOTE: A fountain includes a gerb.
fracteur	<i>See</i> fracture
fracteur tin	<i>See</i> day box
fracture (or fracteur)	Any high explosive other than detonators. NOTE: This term is common to the Australian mining industry.
fragmentation	The extent to which the blasted material is shattered.
fuse head	<i>See</i> fuse igniter
fuse igniter (or fuse head)	A pyrotechnic device which burns with a very hot jetting flame and which is used to ensure ready ignition of safety fuses.
fuse lighter	<i>See</i> fuse igniter
galvanometer	<i>See</i> circuit tester
gelatinous explosive	An explosive commonly containing nitroglycerine or nitroglycol gelatinized with nitrocellulose and characterized by plasticity, high density and water resistance.
gerb	A firework that produces jets of ornamental and brilliant fire. NOTE: It is essentially the same as a fountain but is designed primarily for use on set pieces or stage special effects.
ground display	Fireworks which primarily function on the ground and which may project stars, novelty and other effects above the ground. Ground fireworks include mines, roman candles, lances, fountains, wheels and aerial shells without their lifting charges but do not include aerial shells or rockets.
ground vibration (or vibration)	Oscillatory motion of the ground caused by the passage of seismic waves originating from a blast.
group	<i>See</i> compatibility group
gunpowder	<i>See</i> black powder

Term	Definition
hang fire	A charge which fires later than intended.
harness (or saddle)	A set of electrical delay detonators electrically connected in readiness for insertion in the drill holes and connection to the firing cable.
hazard classification	<i>See</i> classification code
hazard division	<i>See</i> division
hazardous zone	A location containing or likely to contain explosive atmospheres of combustible dusts or flammable vapours. NOTE: Flammable vapours and dusts of explosives may exist simultaneously.
heading blasting	<i>See</i> coyote blasting
heave (or throw)	The extent to which the broken mass of rock is moved from its original location due to expanding gases.
high explosive (HE), (hi-x), (H-x)	An explosive which propagates at a velocity greater than the velocity of sound in the material (typically greater than 340 m/s), e.g. TNT, ANFO, gelignite.
high-temperature blasting	Blasting which is carried out in material at a temperature of 100°C or greater.
hole	<i>See</i> drill hole
hot material	Material of a temperature of between 55°C and 100°C.
igniter cord (or igniter fuse)	A thin cord which burns with an external flame at a faster rate than a safety fuse and which is used to ignite a number of fuses in sequence.
igniter cord connector	Slotted and recessed metal tube containing a pyrotechnic material which is used to connect the igniter cord to the safety fuse.
igniter fuse	<i>See</i> igniter cord
illumination	Fireworks such as flares which burn progressively, producing coloured light.
inert primer (or dummy primer or embedded electric detonator)	A cartridge of inert material containing an electric detonator. It may be used deliberately in shaft sinking to leave a butt.
initiation	The process of inducing a rapid chemical reaction which releases energy from an explosive either by applying heat (ignition) or by imparting a shock (detonation).

Term	Definition
internal portable magazine	<i>See</i> magazine
lance	A small cardboard or paper tube packed with light- or smoke-producing pyrotechnic composition.
lancework set piece	Frame, lattice or other structure on which are attached lances or sparklers fused together with quick-match or other fuse for firing.
layflat tubing	Thin-walled plastic tubing used to contain ANFO in wet holes.
lead wire (or leg wire)	The wire which is permanently attached to the electric detonator.
leg wire	<i>See</i> lead wire
lift charge	The composition in an aerial shell which, when ignited, propels the aerial shell into the air. It usually consists of black powder and is ignited by a quick-match, electric igniter or safety fuse.
line drilling	A line of drill holes, some or all of which are not charged, used for smooth blasting.
loading	<i>See</i> charging
loading tube	<i>See</i> charging hose
long-hole blasting	An underground blasting technique in which long holes are charged and fired.
low explosive	A non-detonating deflagrating explosive, e.g. black powder, propellant powder.
low-freezing explosive (or polar explosive)	An explosive which has been made from a low-freezing point mixture and is suitable for use under cold conditions.
magazine	A specially constructed store which is used exclusively for keeping explosives or pyrotechnics.
external portable	A portable container constructed in accordance with AS 2187.1 and used to store limited amounts of explosives, or used to contain explosives during transport with a maximum capacity of 250 kg, or 500 detonators. It may be used as an internal portable magazine or as a day box.
internal portable	A portable container with a maximum capacity of 60 kg, or 500 detonators, constructed in accordance with AS 2187.1 and used to store limited amounts of explosives in a building that is not a magazine. It may also be used as a day box or as a container for explosives being transported (or in transit).

Term	Definition
permanent (or fixed magazine)	A container constructed in accordance with AS 2187.1 in a manner which precludes relocation to another site.
relocatable	A container constructed in accordance with AS 2187.1 used to store limited amounts of explosives which can be relocated from site-to-site either as an integral unit or as modular components for reassembly. Includes converted freight containers.
magazine shoes	Shoes specially made without iron or steel in the soles and heels, for wearing in magazines.
mains firing (or mains firing box)	The use of electric power from a mains power supply for firing explosive charges.
mains firing box	<i>See</i> mains firing
mass strength (or weight strength)	The explosive strength of a unit mass of an explosive material expressed against a standard reference, e.g. ANFO. (See also bulk strength .)
match fuse	<i>See</i> quick-match
match head detonator	<i>See</i> electric igniter
maximum instantaneous charge (MIC)	The maximum charge, in kilograms, initiated at any instant of time.
mine	A pyrotechnic device fired from the ground which contains a single charge and which may have other pyrotechnic units.
mine bag	A container of pyrotechnics placed and fired in a mortar to produce an instantaneous ground effect.
misfire	A charge or part of a charge which has failed to explode or ignite.
mixing house building	A dedicated building used for the manufacture of explosives.
mobile mixing unit (or mobile manufacturing unit or MMU)	A mobile unit (usually a vehicle) used for the manufacture of explosives.
model rocket	A rocket that is propelled by a model rocket motor and contains a device for returning it to the ground in a condition to fly again, whose structural parts are made of paper, wood, or breakable plastic and contain no substantial metal parts, and whose primary use is for purposes of education, recreation, and sporting competition.

Term	Definition
model rocket motor	A commercially manufactured device designed and used for the propulsion of model rockets. The motor contains less than 62.5 g of propellant and has a capacity for generating a total impulse not exceeding 80 N. NOTE: Some model rocket motors may be reusable.
mortar	Plastic, cardboard, steel or other suitable tube from which an aerial shell and certain types of mine are fired.
mucking out	The clearing of broken or loose material from a blast.
mud capping	<i>See</i> blister shooting
multiple-fuse igniter	A cardboard cartridge for igniting up to eight lengths of safety fuse simultaneously.
multibreak	An aerial shell designed for one lift with two or more bursts in a predetermined sequence.
multishot box item (or combination)	An assembly consisting of tubes, not larger than 30 mm in diameter, fastened together in a vertical array. Each tube contains one or more elements or pyrotechnic units, or both. The tubes are fused together to fire in a predetermined sequence using a single point of ignition (see also bombardos).
Net Equivalent Quantity	The comparative explosive strength of a product to a reference explosive such as ANFO or TNT.
Net explosive quantity (NEQ)	The mass of explosive material contained in an explosive.
nitro-carbo-nitrate (NCN)	An explosive packed in approved sealed containers consisting of ammonium nitrate, carbonaceous material and nitro-compounds other than nitroglycerine and other liquid nitro-compounds.
nitroglycerine (NG)	A high explosive manufactured from the nitration of glycerine. It is a clear, oily, yellow substance, sensitive to friction, shock and heat. It forms a gel, when mixed with nitrocellulose, which is the basis of gelatinous explosives.
nitroglycol (EGDN)	Similar to nitroglycerine but manufactured using ethylene glycol instead of glycerine. It has a lower freezing point than nitroglycerine and is used with or instead of NG to produce gelatinous explosives that are capable of being used safely as a low freezing explosive.
ohmmeter	<i>See</i> circuit tester
Ohm's law	The relationship between voltage (V), current (I) and resistance (R) in simple steady electric circuits; $V = IR$.

Term	Definition
open circuit	An electrical circuit the path of which has been broken or is not continuous.
open cut (or open pit)	Surface excavation as distinct from underground excavation.
open pit	<i>See</i> open cut
operator	A person who has responsibility for or is in charge of— <ul style="list-style-type: none"> (a) setting up display fireworks or firing display fireworks; and (b) ensuring that the health and safety of any person and property is not adversely affected by the storage or use of explosives.
over break	<i>See</i> back break
parallel connection	An electrical circuit which has more than one electrical path.
particle velocity	<i>See</i> peak particle velocity
pattern	A plan showing the layout of holes to be drilled for blasting.
peak particle velocity (PPV) (or particle velocity)	The rate at which a particle of ground is moving, i.e. a measure of ground vibration, in millimetres per second.
permanent magazine (or fixed magazine)	<i>See</i> magazine
perimeter blasting (or cleanwall blasting or cushion blasting)	The techniques involving drill holes around or on the perimeter of an excavation, generally closely spaced, with the purpose of providing a predetermined face. (See also <i>smooth blasting</i> .)
permitted explosive	An explosive approved for use in an underground coal mine.
photoflash powder	A type of flash powder. (See also flash powder .)
plain detonator	A small metal tube containing an explosives composition, which is closed at one end, open at the other and is used in conjunction with a safety fuse.
plaster shot	<i>See</i> blister shooting
plaster shooting	<i>See</i> blister shooting
plastic igniter cord (PIC)	A type of igniter cord
plug	<i>See</i> cartridge
point of launch	The physical location from where the pyrotechnic devices are fired.

Term	Definition
polar explosive	<i>See</i> low freezing explosive
pop (or popping or pop-shooting)	The breaking of rocks by the initiation of a small charge in a pre-drilled hole.
popping	<i>See</i> pop
pop-shooting	<i>See</i> pop
portable magazine (or container)	<i>See</i> magazine
portfire	Tubes of cardboard or paper containing a slow-burning pyrotechnic composition that can be used to ignite fireworks at outdoor firework displays.
power device cartridge	A cartridge consisting of a primer and propellant charge but no projectile, used to power devices such as nail guns, cattle stunners and fire suppression system activators (UN 0381, 0275, 0276, 0323, Classification Codes 1.2C, 1.3C, 1.4C and 1.4S respectively).
powder man	<i>See</i> shot firer
powder monkey	<i>See</i> shot firer
premature explosion	An explosion which occurs earlier than intended.
premises	Any designated land, building, enclosed space or part thereof that is used for the storage of explosives.
pre-splitting	A method of controlled blasting in which the line holes are fired prior to the main charge to create a crack to prevent disturbance beyond the final batter line.
primary blasting	The blasting of original undisturbed or in situ rock.
primed	The condition of high explosives fitted with an initiating device.
primer	The cartridge or that portion of a charge carrying a detonator or coupled to a detonating cord by which the remainder of the charge is detonated.
priming charge	<i>See</i> primer
process building	A building on premises licensed for the manufacture or storage of explosives, other than for immediate use, in which any explosive is manufactured or any ingredient of explosive is used in a manufacturing process.
propellant	A deflagrating explosive that is used for propulsion.

Term	Definition
propellant powder	Black powder or smokeless powder used to launch or propel a device (e.g. UN0027, Classification Code 1.1D, UN0160, Classification Code 1.1C and UN0161, Classification Code 1.3C).
protected type detonator	An electric detonator incorporating a means of minimizing the risk of premature initiation.
protected works	<p>The classes of protected works are as follows:</p> <p><i>Class A:</i> Public street, road or thoroughfare, railway, navigable waterway, dock, wharf, pier or jetty, marketplace, public recreation and sports ground or other open place where the public is accustomed to assemble, open place of work in another occupancy, river-wall, seawall, reservoir, water main (above ground), radio or television transmitter, main electrical substation, private road which is the principal means of access to a church, chapel, college, school, hospital or factory.</p> <p><i>Class B:</i> Dwelling house, public building, church, chapel, college, school, hospital, theatre, cinema or other building or structure where the public is accustomed to assemble, shop, factory, warehouse, store, building in which any person is employed in any trade or business, depot for the keeping of flammable or dangerous goods, major dam.</p>
pyrotechnic device	Any packaged pyrotechnic substance or substances, e.g. aerial shell.
pyrotechnic substance	Substance or mixture of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these, as a result of exothermic chemical reaction which does not rely on oxygen from external sources to sustain the reaction and includes flash powder, gunpowder and coloured fire compositions.
pyrotechnic unit	A discrete unit which is assembled into a fireworks case and which upon functioning will burn or explode to produce a visual effect or aural effect, or both.
qualified locksmith	A member of either the Master Locksmiths' Association of Australia or the Locksmith Guild of Australia.
quarry	A surface excavation normally developed for the extraction of stone.
quick-match (or match fuse)	Rapid burning pyrotechnic fuse consisting of one or more strands of string covered with gunpowder and encased in a loose fitting paper sleeve.

Term	Definition
receptacle	A container, other than a magazine but including a carry box, used for the storage of explosives.
recrystallization	A process which occurs when soluble salts are dissolved out of an explosive by water, which, upon evaporation, leaves a crystalline deposit. NOTE: This may significantly change the performance of such explosive.
regulatory authority	The authority in each State or Territory of Australia charged with the administration of the acts or regulations of that State or Territory concerned with the control and regulation of explosives.
relay	<i>See</i> delay relay
relieving hole	A hole drilled in close proximity to a hole containing a misfire, which when fired will either sympathetically initiate or dislodge the explosives in the misfired hole.
relocatable magazine	<i>See</i> magazine
rheostat	A device with a variable electrical resistance to replace the electrical resistance of a rated number of detonators, which is used when testing the firing capacity of an exploder.
ring blasting (or fan blasting)	A technique used underground in which holes are spread out around the perimeter of the drive or tunnel and are charged and fired.
rod	<i>See</i> capped fuse
rod room	<i>See</i> capping station
Roman candle	<i>See</i> candle
rotational firing	<i>See</i> firing sequence
round	The selected pattern of holes used in drilling a face underground.
saddle	<i>See</i> harness
safety cap	Paper or plastic tube, closed at one end, which is placed over the end of the fuse attached to an aerial shell to protect it from damage and accidental ignition.
safety cartridge	Cartridge for small arms weapons or industrial tools which are explosives of Classification Code 1.4S (UN0012).

Term	Definition
safety fuse (or sump fuse)	A fuse for blasting— <ul style="list-style-type: none"> (a) that burns at a rate falling within defined limits; (b) that does not explode; (c) whose burning will not be communicated laterally to itself or other similar fuses; and (d) that is used to initiate plain detonators and gunpowder.
salute	Aerial shells or pyrotechnic units contained within an aerial shell which is intended to produce a loud report, with or without a brilliant flash of light or sparks.
salute powder	A form of black powder whose explosive properties are enhanced through the substitution of some or all of the nitrate component with chlorate or perchlorate, powdered aluminium or other substances. Salute powder produces a sharper and louder report than black powder, and is used in fireworks, e.g. salutes and crackers. NOTE: Chlorate compositions are inherently unsafe and their use is generally prohibited.
sausage (or sock)	Plastic tubing filled with explosives for charging in a wet hole.
secondary blasting	The reblasting of oversize rocks resulting from primary blasting.
secured area	An area that contains the display site, is under the control of the operator and is used for the storage, setting up and firing of display fireworks.
seismic blasting	The use of explosives to initiate a shock wave, the variation of which is measured for geological information.
separation distance	The recommended distance intended to— <ul style="list-style-type: none"> (a) prevent the immediate direct propagation of an explosion or fire from one magazine to another by missile, flame or blast; and (b) minimize the risk of an explosion which has the potential to cause damage to protected works or injury to persons.
sequence firing	<i>See</i> firing sequence
series connection	An electrical circuit in which there is only one electrical path.
serpent (or tourbillon)	A fireworks designed to spin freely in the air. NOTE: It may be used in a ground display.
shatter cut	<i>See</i> burn cut
shell	<i>See</i> aerial shell

Term	Definition
shock tube	<i>See</i> signal tube
shopgoods firework	A firework containing less than 40g of explosive material, suitable for use in small areas, e.g. residential yard, by persons not trained in its safe use.
shot firer (or powder man or powder monkey)	An person who uses blasting explosives and is responsible for preparing, charging and firing explosives.
shot firing	<i>See</i> blasting
shot firing lead	<i>See</i> firing cable
shot hole	<i>See</i> blast hole
shooting	<i>See</i> blasting
signal tube (or shock tube)	A small-bore, flexible plastic tube coated internally with an explosive powder so that it is capable of transmitting a shock wave along the length of the tube.
signal tube detonator	A detonator which has been crimped by the manufacturer to a length of signal tube.
signal tube starter	A device for initiating the explosion in a signal tube.
single break	An aerial shell designed for one lift with only one burst.
sinking cut	<i>See</i> box cut
sky rocket	A casing which contains pyrotechnic material which upon initiation produces a jet of flame to propel the rocket into the air and which may also contain a bursting charge to produce an aural or visual effect, which is initiated once the propellant is expired. Sky rockets also have a stick of predetermined length and diameter to stabilize their flight.
sleep time	The time between explosives being loaded into a blasthole and their initiation.
slurry	<i>See</i> watertgel
slurry explosive	<i>See</i> watertgel
smokeless powder	A granular powder containing nitrocellulose or nitrocellulose and nitroglycerine with other ingredients, formulated to produce a propellant powder.

Term	Definition
smoke	A pyrotechnic device which produces smoke through the burning of substances, usually coloured, which are volatilized and then condense in air to produce clouds of finely divided dust of the desired colour.
smooth blasting	A method of firing holes in a manner that avoids excessive fracturing with the aim of preserving a smooth outline. (See also perimeter blasting and pre-splitting .)
sodium nitrate (SN)	An oxidizing agent used in the manufacture of explosives.
snake holing	A rock-breaking technique, similar to blister shooting, except that the charges are placed under the rocks or stumps to lift as well as break them.
socket	<i>See</i> butt
sock	<i>See</i> sausage
sound signal	<i>See</i> acoustic warning
spacer	Length of non-explosive material, e.g. wood or ceramic, of a cross-sectional area less than that of the explosive cartridge, interposed between charges to extend the column of explosives.
spacing	The design distance between drill holes in the same row.
special effect	A pyrotechnic component designed to produce a specific effect, e.g. flash, sound or spin.
springing	<i>See</i> bulling
squib	<i>See</i> electric igniter
stab hole (or collar burster)	A short blast hole used to reduce excessive burdens.
star	A pyrotechnic unit which burns, producing light, sparks, sound or smoke. Stars do not include comets, crackers or serpents.
static electricity	Extraneous electricity which consists of an electrical charge that is stored on some object or person and is usually generated by friction between materials.
stemming material	Sand or other inert material used to maximize the effect of an explosion, by filling the remainder of holes or between decks of explosives after the holes have been charged with explosives.
stick	<i>See</i> cartridge

Term	Definition
stray current	Extraneous electricity which generally consists of electrical currents which flow through the earth or from electrically operated equipment to earth.
strip mine	A surface excavation normally applied to coal or non-metallic sedimentary material overlaid by sedimentary rock where removal of material is by sequential strips.
subgrade	<i>See</i> sub-drilling
subclass	<i>See</i> division
sub-drilling (or subgrade)	The length of a hole drilled beyond grade level.
sump fuse	<i>See</i> safety fuse
sympathetic detonation (or flashover)	Detonation of an explosive charge caused by the shock wave from the explosion of an adjacent charge.
tail	<i>See</i> capped fuse
tamping	The act of consolidating stemming material or pressing explosive cartridge in a drill hole.
tape	<i>See</i> capped fuse
theatrical firework	A firework designed for theatrical use and which has been classified as such by the regulatory authority.
throw	<i>See</i> heave
toe	The junction of the face and the floor. Also, unbroken rock remaining at the junction of the face and floor.
toe hole	Drill hole at the toe of a face used to reduce excessive burdens.
tourbillon	<i>See</i> serpent
trinitrotoluene (TNT)	A high explosive.
trunkline	The main line of detonating cord or signal tube on the surface to which branch lines are connected.
tunnel blasting	<i>See</i> coyote blasting
underground magazine	An enclosed cavity formed in underground rock, or a magazine constructed in accordance with AS 2187.1 for underground use, which is used for the storage of explosives and detonators.

Term	Definition
underground working party magazine	A portable container constructed in accordance with AS 2187.1 and used for the storage of limited amounts of explosives and detonators in designated underground locations.
velocity of detonation (VOD)	A measure of the rate, in metres per second, at which the detonation wave travels through an explosive.
vibration	<i>See</i> ground vibration
vulnerable facility	A category of facility that includes, but is not restricted to, the following: <ul style="list-style-type: none"> (a) Multistorey buildings, e.g. above 4 storeys. (b) Large glass fronted buildings of high population. (c) Health care facilities, childcare facilities, schools. (d) Public buildings or structures of major historical value. (e) Major traffic terminals, e.g. railway stations, airports. (f) Major public utilities, e.g. gas, water, electricity works.
warning signal	<i>See</i> acoustic warning
waterfall	Fountains or gerbs which are fused together for simultaneous firing and which may be suspended in the air to produce a waterfall effect.
water gel (or slurry or slurry explosive)	High explosives composed of gelled, saturated aqueous solutions usually containing suspended solids and consisting of oxidizing salts, fuel components and various sensitizers.
weight strength	<i>See</i> mass strength
wheel	A pyrotechnic device which is designed to rotate about a fixed point.

APPENDIX A
REFERENCED DOCUMENTS
(Normative)

The following documents are referred to in this Standard:

AS

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| 1216 | Class labels for dangerous goods |
| 1530 | Methods for fire tests on building materials, components and structures |
| 1530.1 | Part 1: Combustibility test for materials |
| 1678 | Emergency procedure guide—Transport |
| 2187 | Explosives—Storage, transport and use |
| 2187.0 | Part 0: Terminology |
| 2187.1 | Part 1: Storage |
| 2187.2 | Part 2: Use of explosives |
| 2430 | Classification of hazardous areas |
| 2430.2 | Part 2: Combustible dusts |

National Road Transport Commission 1998, *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*, AGPS, Canberra.

Department of Transport and Communication 1990, *Australian Code for the Transport of Explosives by Road and Rail (Australian Explosives Code)*, Federal Office of Road Safety, Canberra.

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