

Investigation information release

Date: November 2025

Unintentional detonation of explosive device

Incident date: 28 October 2025

Event: Unintentional detonation of explosive device

Location: Endeavor Mine, Cobar NSW

The mine

Endeavor mine is an underground silver, zinc and lead mine about 40 kilometres north of Cobar, in central western NSW. Ore is mined using the long hole open stope mining method (stopping).

Stoping is the process of extracting ore from an underground mine, leaving behind an open space, known as a stope within a drawpoint (Figure 1). This method of mining can result in ore being 'hung-up' (rock that is not or is partially fragmented), requiring workers to release the ore using methods including the initiation of explosives.

Figure 1: Photo of a drawpoint (not related to incident)



The incident

Three workers were on the 500 level of the underground mine workings on Tuesday 28 October 2025 about 3.30 am, preparing a BD260 ballistic disc (Figure 2) to clear a hang-up in a drawpoint.

Ballistic discs are a Division 1.1D authorised explosive in New South Wales. Components of a ballistic disc include an exterior casing, a detonating cord with an aluminium shell, booster and 6.9 kg of mix of Cyclotrimethylenetrinitramine (RDX) and Trinitrotoluene (TNT). An electric instantaneous detonator assembly (Figure 2) is a Division 1.4B explosive and used in the process of initiating ballistic discs at the mine.

Figure 2: Photo of a ballistic disc (left) and an electric instantaneous detonator



The proposed detonation of the ballistic disc on the day of the incident was scheduled to occur between 5.45 am and 6.00 am. Firing explosives, including ballistic discs is done by using a mains firing line which is initiated at the surface, after all workers are removed from the mine.

While the 3 workers were preparing the ballistic disc underground, it unintentionally detonated resulting in 2 workers suffering fatal injuries, while a third worker was seriously injured. Connecting wire, used to connect the electric instantaneous detonator assembly to the mains firing line, was not connected and found on the shot firer's vehicle.

The investigation

The Resources Regulator has commenced an investigation to determine the cause and circumstances of the incident that will explore, among other things:

- the systems of work for the use, handling and preparation of ballistic discs and electric instantaneous detonator assemblies
- the effects of hazards associated with radio frequency (RF) from communication equipment including two-way radios, mobile phones (smart watches) and amplifiers/repeaters in proximity to explosives
- instructions, training, experience and supervision provided to workers who use, handle and prepare ballistic discs and electric instantaneous detonator assemblies

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- the adequacy of risks assessments, procedures and safe work instructions relevant to using ballistic discs and electric instantaneous detonator assemblies
- instruction, information and guidance provided by designers and manufacturers regarding the use, handling and preparation of ballistic discs
- an assessment of the ballistic discs and detonators to ensure they comply with the manufacturer's specifications
- using electric instantaneous detonator assemblies to initiate ballistics discs.

Further information

Please refer to the following guidance materials:

- *Explosives Act 2003* (NSW) and its associated Regulation
- Australian Standard AS2187.2 (2006) - Explosives storage and use, including:
 - Section 2 general requirements, 2.4 sources of ignition near explosives
 - Section 8 general provisions
 - 8.1.2 allocation of responsibilities
 - 8.2 method of initiation
 - 8.2.4 electric firing
 - Section 12.1 Extraneous Electricity
- Resources Regulator Fact sheet - Safe use and handling of electric detonators
- Resources Regulator Safety Alert SA25-06 Double fatality after unintended initiation of explosive device October 2025
- Manufacture Safety Data Sheets for instantaneous electric detonators
- Ballistic disc 260 technical data sheet (attached as Annexure A)

Note: Attachment annexure A is not available online and attached for information purposes

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About this information release

The Regulator has issued this information in accordance with its standard policies to draw attention to the occurrence of a serious incident in the mining industry. Further information will be published when the investigation is complete.

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- learn more about our work on causal investigations and emergency response
- view our publications on other causal investigations

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Document control	
CM10 reference	D25/147440
Mine safety reference	IIR25-08
Date published	25 November 2025
Authorised by	Chief Investigator

Ballistic Disc 260 [BD260]

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TECHNICAL PROPERTIES

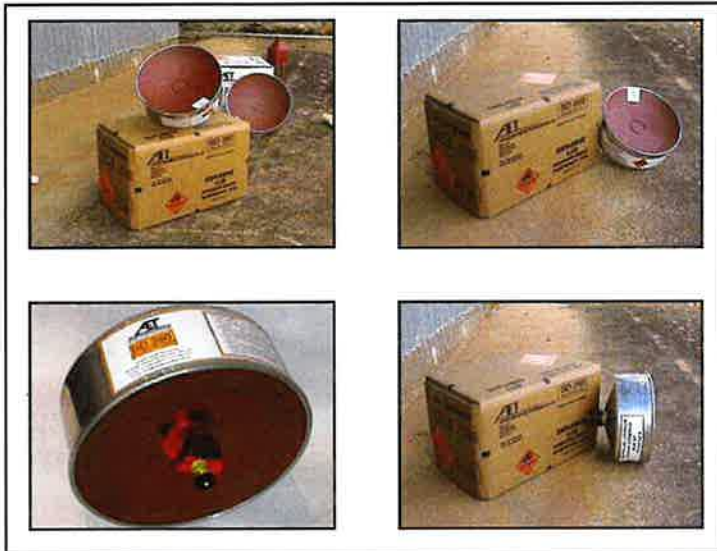
Diameter: 257mm
 Net Explosive Weight: 6.9kg
 Gross Weight: 9.2kg
 Explosive Fill: RDX/TNT

PACKAGING

Fibreboard Box: 260 x 260 x 388mm
 UN No: 0059
 Proper Shipping Name: CHARGES, SHAPED, COMMERCIAL
 Classification Code: 1.1D

STORAGE

- BD260 has a minimum shelf life of 5 years in good storage conditions.
- These units should be stored in a cool, dry magazine licensed for 1.1D explosives, and oldest charges should be used first.

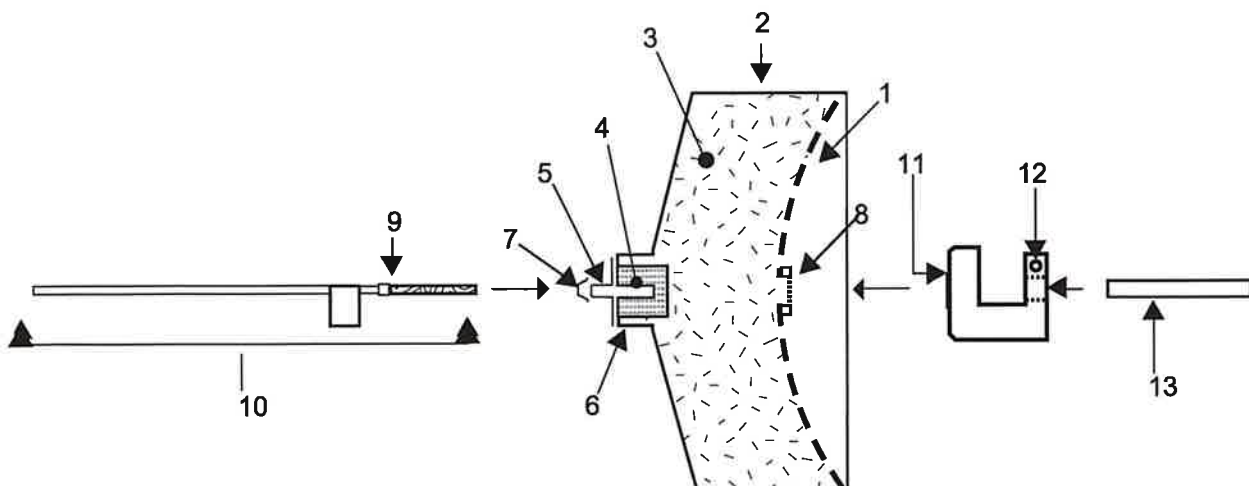


BD260 PARTS LIST

- Steel Disc
- Exterior Casing
- Explosive Fill
- Booster Well
- Plastic Housing
- Plastic Over Cap
- Disposable End Cap
- Locating Ring
- Aluminium Sleeve
- Detonating Cord Assembly

LASERAIMING PARTS LIST

- Magnet
- Laser Holder
- Laser



DESCRIPTION

BD260 Ballistic Discs provide a safe and effective way of clearing hang ups and pillars in draw points of stopes remotely.

A BD260 comprises 6.9 kilograms of RDX/TNT composition cast into an aluminium casing capped with a concave steel disc.

When detonated, a BD260 produces a large steel slug that is propelled at high velocity in the direction aimed. The slug impacts with approximately 9 Mega Joules of energy and is accurate to a least 60 metres.

A narrow tunnel RDX/Wax booster is fitted into the BD260 turret during manufacture. A matching Detonating Cord Assembly is provided for safe and convenient attachment of any preferred initiation system: electric / non-electric detonators or detonating cord. **NOTE: Do not attempt to fit detonators directly into the booster tunnel; it is too small for a detonator.**

The Detonating Cord Assembly comprises of a length of 20g/m detonating cord with an aluminium sleeve crimped over one end. The aluminium sleeve is not a detonator.

SAFETY

When a BD260 is used, appropriate measures must be taken to protect persons and property in all nearby areas. In addition to the explosive force that propels the slug to the target, the high detonation velocity of the explosive produces a considerable and extensive air-blast.

If poorly aimed the slug can ricochet. Detonation of the charge generates toxic fumes. As safeguards to these and other potential hazards, the following precautionary measures should be taken.

> Transport BD260s in their original packaging with the steel discs opposed.

> Do not transport with detonators.

> Leave any doors/shafts open to permit dissipation of the air shock wave.

> When setting the BD260 make sure it is in a stable position. If the charge is moved after aiming, the slug will be misdirected with potentially disastrous results.

> Use sand bags or alternate suitable material to seat the charge on. This will act as a shock decoupler and minimise any potential damage due to vibration.

> Ensure the Detonating Cord Assembly is correctly inserted into the charge (Do not attempt to insert detonators into the charge). An incorrectly primed charge will result in a malformed, aerodynamically unstable slug that will travel in an unpredictable direction.

> Take extreme care in aiming the charge. Careless aiming may result in high velocity ricochet problems and damage to non-target areas.

> After aiming, make sure that aiming device is removed and there are no obstructions along the aim line between the disc and the target rock or area.

> Clear the area before firing making sure the personnel will not be exposed to the air-blast.

> Toxic fumes are generated on detonation of the BD260. Allow sufficient time for fumes to disperse before entering the blast area.

> BD260s contain a RDX/TNT composition that generates a hot long lasting flash/fireball on detonation. Be aware of the potential risk of dust explosion hazards & take adequate precautions; ie. wetdowns, insert dustbag placement etc. if necessary.

RECOMMENDATIONS FOR USE

1. Mount the BD260 in sandbags, or other suitable cradle, with the steel concave disc pointing towards the intended target zone. Ensure there is a direct line of sight from the position of the BD260 to the target.

2. Remove the detonating-cord-assembly from its protective packaging and uncoil.

3. Remove the red plastic end cap from rear white plastic housing on the BD260. Ensure that the plastic housing remains free from dirt and grit.

4. Insert the aluminium sleeve, of the Detonating Cord Assembly, carefully into the white plastic housing. Gently ensure that the aluminium sleeve is fully inserted & seated home. Do not tamper with the plastic over-cap or use force in any way.

5. Fit an AET Laser Aimer to the disc by aligning the Aimer's round base with the ring secured to the face of the disc. Once the Aimer's base is sufficiently close to the disc face the aimer will self-secure to the disc by the action of the magnet.

6. Adjust the BD260 position, as necessary, so that the target position is illuminated by the laser. Ensure that there is no obstruction, at all, in the path of the ballistic projectile.

7. Remove the Laser Aimer without disturbing the position of the BD260.

8. Connect the Detonating Cord Assembly to electric / non-electric / detonating cord initiating system. Electrical tape is recommended. Ensure that the positioning of the BD260 is not disturbed. For firing of two, or more, BD260s, in the same drive, lengths of detonating cord need to be arrayed in an equal length V. This is so that the discs will detonate simultaneously and there will be no risk of the first firing disc interfering with the functioning of an adjacent disc.

9. Clear the blast area of personnel and unnecessary equipment, withdraw to a safe area. Follow authorised safety and blasting procedures prior to firing.