



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Coal Dust Explosion Prevention and Control

Health Sciences and Social Services / Preventive Health

Unit Standard 259608 · NQF Level 2 · 5 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to prevent and control coal dust explosions in underground and surface mining operations. Participants will understand the mechanisms of coal dust explosions, including propagation, and learn to implement effective prevention and control measures. The course emphasises compliance with South African mine health and safety regulations and best practices.

Category	Health Sciences and Social Services
Subfield	Preventive Health
Unit Standard	259608
Accreditation	SAQA Accredited · NQF Level 2 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Explain the conditions required for a coal dust explosion and the mechanisms of propagation.
- Identify and evaluate the effectiveness of primary prevention measures, including stone dusting and inerting.
- Demonstrate the correct application of explosion barriers and suppression systems.
- Analyse risk factors and develop strategies to mitigate the propagation of coal dust explosions.
- Apply relevant South African mine health and safety legislation and standards to explosion prevention.
- Design a basic explosion prevention and control plan for a specified mining section.

WHO SHOULD ATTEND

- This course is designed for mine safety officers, shift supervisors, mining engineers, and health and safety representatives working in coal mining operations.
- It is also suitable for anyone responsible for implementing or monitoring explosion prevention and control systems.

COURSE OUTLINE

Day 1: Fundamentals of Coal Dust Explosions

- Introduction to coal dust explosions: history and significance
- The explosion pentagon: fuel, oxygen, ignition source, dispersion, confinement
- Dust explosibility parameters: Kst, Pmax, MIE, MEC
- Factors influencing explosion severity: particle size, concentration, moisture
- Overview of legal requirements: Mine Health and Safety Act, regulations
- Basic housekeeping and dust accumulation control

Day 2: Prevention, Mitigation, and Practical Integration

- Prevention strategies: inerting, venting, suppression systems
- Explosion isolation: barriers, flap valves, chemical isolation
- Electrical equipment and hot work controls
- Risk assessment methodology for dust explosion hazards
- Emergency response planning and evacuation procedures
- Case studies: recent South African and global incidents
- Developing a site-specific explosion prevention programme

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **5 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,300.00	R 11,300.00
1	In-House	R 14,700.00	R 14,700.00
1	On-Campus (Pretoria)	R 17,000.00	R 17,000.00

UPCOMING SESSIONS

Start	End	Method	Venue
24 Aug 2026	25 Aug 2026	On-Campus	Bangkok, Thailand
24 Aug 2026	25 Aug 2026	On-Campus	Shenzhen, China
24 Aug 2026	25 Aug 2026	On-Campus	Abu Dhabi, UAE
26 Aug 2026	27 Aug 2026	On-Campus	Durban, South Africa
26 Aug 2026	27 Aug 2026	On-Campus	Harare, Zimbabwe
26 Aug 2026	27 Aug 2026	On-Campus	Victoria Falls, Zimbabwe
01 Sep 2026	02 Sep 2026	On-Campus	London, UK
01 Sep 2026	02 Sep 2026	On-Campus	Bangkok, Thailand

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 259608) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call +27 12 004 8389 or WhatsApp +27 65 077 6310 and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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