



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

Explosives Performance Testing And Results Interpretation Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 116007 · NQF Level 4 · 10 Credits · 7 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills required to conduct performance tests on explosives and interpret the results accurately. It covers the principles of explosive performance testing, safety protocols, and data analysis to ensure compliance with industry standards and regulatory requirements.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	116007
Accreditation	SAQA Accredited · NQF Level 4 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply standard procedures for conducting explosive performance tests, including velocity of detonation, brisance, and sensitivity measurements.
- Analyze test results to determine explosive performance characteristics and identify deviations from expected norms.
- Evaluate safety implications of test outcomes and recommend corrective actions to mitigate risks.
- Interpret data from multiple test methods to assess explosive suitability for specific blasting applications.
- Implement quality control measures to ensure consistency and reliability of performance testing processes.
- Demonstrate compliance with relevant South African legislation and industry standards for explosives testing.

WHO SHOULD ATTEND

- This training is designed for mining engineers, blasting technicians, explosives inspectors, and safety officers involved in the handling, testing, and application of explosives in mining and civil engineering operations.

COURSE OUTLINE

Day 1: Introduction to Explosives Performance Testing

- Overview of explosives types and classifications
- Principles of performance testing
- South African regulatory bodies and legislation (e.g., SABS, MHSA)
- Unit standard 116007 scope and outcomes
- Safety protocols and risk management in testing environments
- Introduction to test methods and standards

Day 2: Explosive Properties and Measurement Techniques

- Key properties: density, detonation velocity, pressure, energy output
- Measurement instruments: chronographs, pressure gauges, calorimeters
- Sensitivity tests: impact, friction, electrostatic discharge
- Data collection and recording procedures
- Introduction to statistical analysis of test results

Day 3: Standardized Test Methods and Procedures

- Trauzl lead block test for brisance
- Underwater explosion test for energy output
- Ballistic mortar test for relative effectiveness
- Detonation velocity measurement (Dautriche method)
- Calibration and maintenance of test equipment
- Quality assurance and control in testing

Day 4: Data Analysis and Interpretation Fundamentals

- Descriptive statistics: mean, median, standard deviation
- Graphical analysis: histograms, scatter plots, trend lines
- Confidence intervals and significance testing
- Correlation between test methods and field performance
- Common pitfalls in data interpretation
- Case studies: analyzing real test data sets

Day 5: Advanced Testing and Specialized Applications

- Temperature and pressure sensitivity testing
- Shock-to-detonation transition tests
- Gap test for sensitivity to sympathetic detonation
- Underwater shockwave analysis
- Testing of blasting agents and slurries
- Performance of explosives in confined vs. unconfined conditions

Day 6: Result Interpretation for Safety and Compliance

- Hazard classification based on UN recommendations
- Safety data sheet (SDS) interpretation
- Reporting formats for SABS and DMR
- Root cause analysis of performance failures
- Case studies: incidents due to misinterpretation
- Best practices for communication of results

Day 7: Practical Integration and Assessment

- Hands-on practical: execute a standardized test
- Data analysis and report writing exercise
- Peer review of test reports
- Mock assessment covering theory and practical
- Feedback and improvement strategies
- Course review and Q&A; session

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 **10 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 28,200.00	R 28,200.00
1	In-House	R 36,700.00	R 36,700.00
1	On-Campus (Pretoria)	R 42,300.00	R 42,300.00

UPCOMING SESSIONS

Start	End	Method	Venue
04 Aug 2026	12 Aug 2026	On-Campus	Dubai, UAE
05 Aug 2026	13 Aug 2026	On-Campus	Pretoria, South Africa
05 Aug 2026	13 Aug 2026	On-Campus	Lagos, Nigeria
06 Aug 2026	14 Aug 2026	On-Campus	Johannesburg, South Africa
07 Aug 2026	17 Aug 2026	On-Campus	Mauritius
10 Aug 2026	18 Aug 2026	On-Campus	Dubai, UAE
11 Aug 2026	19 Aug 2026	On-Campus	Pretoria, South Africa
12 Aug 2026	20 Aug 2026	On-Campus	Abu Dhabi, UAE

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 116007) 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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