



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

Prepare Material Chemically For Input Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 119051 · NQF Level 4 · 10 Credits · 7 Days

COURSE OVERVIEW

This course provides learners with the knowledge and skills to prepare materials chemically for input into a production or manufacturing process. It covers the safe handling of chemicals, correct mixing procedures, and quality control measures to ensure that materials meet required specifications. The course is designed to enhance workplace efficiency and safety in chemical preparation tasks.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	119051
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 safety procedures when handling and storing chemicals according to relevant regulations and workplace policies.
- Demonstrate correct techniques for measuring, mixing, and preparing chemical solutions to specified concentrations.
- Analyze material properties and adjust preparation methods to meet input quality requirements.
- Implement quality control checks to verify that prepared materials conform to standards.
- Evaluate potential hazards and implement control measures to prevent accidents during chemical preparation.
- Document preparation processes and results accurately for traceability and compliance.

WHO SHOULD ATTEND

- This course is intended for operators, technicians, and production workers who are responsible for preparing chemicals or materials for processing in industries such as manufacturing, mining, or agriculture.

COURSE OUTLINE

Day 1: Introduction to Chemical Preparation Principles

- Overview of chemical preparation in industrial contexts.
- Relevant OHS Act, COIDA, and NEMA requirements.
- Classification of chemicals: acids, bases, solvents, etc.
- Material Safety Data Sheets (MSDS) interpretation.
- Introduction to SOPs and documentation.
- Personal protective equipment (PPE) requirements.

Day 2: Material Assessment and Selection

- Material properties: porosity, reactivity, composition.
- Chemical selection criteria for cleaning, etching, or coating.
- Compatibility testing methods.
- Documentation of material and chemical specifications.
- Case studies on incorrect chemical selection.

Day 3: Chemical Handling and Mixing Procedures

- Safe pouring, transferring, and mixing techniques.
- Measuring tools: graduated cylinders, pipettes, balances.
- Calculating required volumes and concentrations.
- Step-by-step mixing procedures for common solutions.
- Emergency spill response procedures.

Day 4: Application Methods and Process Control

- Application techniques: dipping, spraying, brushing, immersion.
- Process control variables and their effects.
- Using pH meters, thermometers, and timers.
- Adjusting concentration or exposure time.
- Recording data in process logs.

Day 5: Quality Assurance and Testing

- Quality criteria for prepared materials.
- Testing methods: visual inspection, adhesion tests, contact angle.
- Troubleshooting defects like residues or uneven coating.
- Corrective actions: re-cleaning, re-application.
- Documentation of quality results.

Day 6: Waste Management and Environmental Compliance

- Types of waste: hazardous, non-hazardous, recyclable.
- Waste storage and labelling requirements.
- Disposal methods according to SANS 10228.
- Environmental impact reduction strategies.
- Emergency procedures for chemical spills.

Day 7: Integration, Assessment, and Certification

- Full process simulation: material assessment, chemical selection, preparation, application, quality check, waste management.
- Practical assessment tasks.
- Compilation of logbooks and reports.

- Feedback and improvement plans.
- Certification requirements and next steps.

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
05 Aug 2026	13 Aug 2026	On-Campus	Mauritius
06 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
07 Aug 2026	17 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	18 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	19 Aug 2026	On-Campus	Durban, South Africa
11 Aug 2026	19 Aug 2026	On-Campus	Mauritius
12 Aug 2026	20 Aug 2026	On-Campus	Cape Town, South Africa
13 Aug 2026	21 Aug 2026	On-Campus	Dubai, 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 119051) 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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