



Australian Government

**UETDRDU023 Joint, terminate and
maintain high voltage Ethylene Propylene
Rubber (EPR) cable**

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Modification History

Release	Comments
1	This unit of competency was first released in UET Transmission, Distribution and Rail Sector Release 7.0.

Application

This unit involves the skills and knowledge required to joint, terminate and maintain high voltage (HV) Ethylene Propylene Rubber (EPR) cable.

It includes jointing, terminating and the testing of cable in new installations. It also includes maintaining cable in existing installations, including repairing, replacing, re-jointing or re-terminating and testing of de-energised cable. It includes using a range of tools, equipment, specialised materials and manufacturer's instructions.

Licensing/Regulatory Information

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

Other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite unit(s)

[UEECD0007](#) Apply work health and safety regulations, codes and practices in the workplace

[UEECD0019](#) Fabricate, assemble and dismantle utilities industry components

[UEECD0044](#) Solve problems in multiple path circuits

[UEECD0046](#) Solve problems in single path circuits

[UEECD0051](#) Use drawings, diagrams, schedules, standards, codes and specifications

[UEEEL0020](#) Solve problems in low voltage a.c. circuits

[UEEEL0021](#) Solve problems in magnetic and electromagnetic devices

[UETDREL001](#) Apply environmental requirements

[UETDREL005](#) Work safely in the vicinity of live electrical apparatus

Competency field(s)

Distribution Underground

Unit sector(s)

N/A

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to Joint, Terminate and Maintain HV EPR cable	1.1 Refer to and confirm legislation, regulations, standards, codes of practice, and organisational workplace requirements for the work to be performed.
	1.2 Obtain and confirm the work plan in line with workplace requirements.
	1.3 Determine and obtain required materials in accordance with the work plan and workplace requirements.
	1.4 Determine, obtain and confirm tools, equipment and personal protective equipment (PPE) are in working order.
	1.5 Identify hazards, assess risks and apply appropriate control measures.
	1.6 Prioritise and sequence work for completion according to the work plan and workplace requirements.
	1.7 Prepare the worksite in accordance with the work plan and workplace requirements.
2. Carry Out the Jointing and Terminating of HV EPR cable in New Installations	2.1 Apply and monitor legislation, regulations, standards, codes of practice, and workplace requirements throughout the work.
	2.2 Perform manual handling tasks, work in confined spaces, and use tools, equipment and PPE in line with workplace requirements.
	2.3 Monitor and maintain hazard control measures in accordance with workplace requirements.
	2.4 Receive and sign work permits as per workplace procedures.

	2.5 Test the cable prior to jointing or terminating as per the work plan and procedures.
	2.6 Prepare the cable for jointing or terminating following the manufacturer's instructions and workplace requirements.
	2.7 Complete jointing or terminating of the cable in line with manufacturer's instructions and workplace requirements.
	2.8 Test the cable post-jointing or termination in accordance with the work plan and workplace requirements.
	2.9 Sign off work permits in line with workplace procedures.
	2.10 Respond to incidents or unplanned events in line with workplace requirements.
	2.11 Conduct quality checks of the work in accordance with the work plan and workplace requirements.
3. Carry out the maintenance of de-energised HV EPR cable	3.1 Apply and monitor legislation, regulations, standards, codes of practice, and organisational workplace requirements.
	3.2 Carry out manual handling tasks, work in confined spaces, and use tools, equipment and PPE in accordance with workplace requirements.
	3.3 Monitor hazard control measures in line with workplace procedures.
	3.4 Identify and spike or cut the cable in accordance with workplace requirements.
	3.5 Receive and sign work permits as per workplace procedures.
	3.6 Test the cable in line with the work plan and workplace requirements.
	3.7 Prepare the cable for maintenance following manufacturer's instructions and workplace requirements.

	3.8 Perform maintenance on the cable as per manufacturer's instructions and workplace requirements.
	3.9 Test the cable, joints and terminations according to the work plan and workplace requirements.
	3.10 Sign off work permits in line with workplace procedures.
	3.11 Respond to incidents or unplanned events in accordance with workplace requirements.
	3.12 Perform quality checks of the completed work in accordance with the work plan and procedures.
4. Complete Work and Documentation	4.1 Check joint, termination or maintenance for compliance against the work plan and workplace requirements.
	4.2 Report incidents or unplanned events in line with workplace procedures.
	4.3 Rehabilitate, clean and make the worksite safe in accordance with workplace requirements.
	4.4 Clean, check, and return tools and equipment to storage in line with workplace procedures.
	4.5 Return or dispose of surplus materials according to workplace requirements.
	4.6 Complete work records, reports and documentation in line with workplace requirements.

Foundation skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Learning	• Applies knowledge of procedures and equipment to complete tasks. • Seeks clarification or additional information where required. • Reflects on performance to improve future outcomes.
Reading	• Reads and interprets work plans, cable diagrams, permits, standards, codes of practice, manufacturer's instructions, and

	technical documentation relevant to jointing and maintaining HV cables.
Writing	• Completes workplace documentation including hazard assessments, job records, incident reports, permits, and test results. • Records information using required formats, terminology and legible handwriting or digital input.
Communication	• Listens and responds to verbal instructions. • Asks questions to confirm understanding. • Participates in workplace discussions. • Reports hazards or incidents clearly and promptly.
Numeracy	• Interprets numerical information in technical drawings and specifications. • Performs cable measurements. • Test result calculations. • Evaluates numerical data for voltage, continuity and resistance.

Range of conditions

N/A

Assessment Requirements for UETDRDU023 Joint, terminate and maintain high voltage Ethylene Propylene Rubber (EPR) cable

Performance Evidence

Evidence required to demonstrate competence in this unit must reflect industry-standard practices and compliance with manufacturer and regulatory requirements. The candidate must demonstrate the ability to joint, terminate and maintain HV EPR cable.

Evidence must show that the individual can:

- apply relevant legislation, regulations, standards, codes of practice and organisational workplace requirements, including:
 - work health and safety (WHS)/occupational health and safety (OHS)
 - protecting existing underground services
 - handling underground power cables
 - using liquefied petroleum gas (LPG)
 - identify hazards, assess risks, identify, apply and monitor control measures
 - obtaining, inspecting and using relevant personal protective equipment (PPE)
 - obtaining and signing on and off relevant work permits in accordance with workplace requirements
 - interpreting and using drawings, diagrams and instructions
- complete at least one (1) of the following cable joints:
 - straight through
 - breech/branch /tee joint
- use at least one (1) of the following cable jointing/terminating products:
 - taped resin
 - heat shrink
 - cold applied
- complete at least two (2) of the following cable terminations:
 - transformer
 - switchgear
 - plugs, couplers and receptacles
- use the following cable connection methods:
 - mechanical/screw connector
 - compression lug
- complete the following cable maintenance tasks:

- repair outer sheath
 - replace termination lug
- complete at least one (1) of the following to determine cable electrical status:
 - spiking
 - guillotine or remote cutting
- complete the following cable tests:
 - voltage
 - continuity
 - insulation resistance
 - phase identification
- complete relevant work records, reports and documentation.

Knowledge Evidence

The individual must demonstrate knowledge of:

- legislation, regulations, standards, codes of practice and organisational workplace requirements, including:
 - WHS/OHS
 - safe approach distances
 - working in confined spaces
 - excavation and trench safety
 - LPG equipment and testing
 - cable spiking, guillotine/remote cutting
 - manual handling
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- identification and safe use of correct tools and equipment
- application, purpose and types of permits
- events that constitute an incident or unplanned event
- procedures for responding to an unplanned event or incident
- cable alignment and identification
- work plan requirements, including:
 - types of and layout of drawings
 - manufacturer's instructions
 - testing plan

- quality checklist
 - workplace documentation procedures
- high voltage (HV) Ethylene Propylene Rubber (EPR) cable, including:
 - types and sizes
 - common applications
 - construction, characteristics and properties
 - electrical stress control
 - minimum bending radius
- cable jointing, terminating and maintenance requirements, including:
 - cable handling techniques
 - jointing principles, techniques and procedures
 - cable repair techniques and procedures
 - types of cable damage/defects
 - use of test equipment
 - testing procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated conditions involving realistic and authentic activities that replicate operational workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and PPE currently used for jointing, terminating and maintaining HV EPR cable
- applicable documentation, including workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice and manufacturer's instructions.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
	Newly created	This unit has been created to address a skill or task required by industry that is not covered by an existing unit of competency

Links

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>.