



Australian Government

HLTDET010 Join alloy structures

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>HLT Health Training Package release 3.0</i> and meets the requirements of the 2012 Standards for Training Packages. Minimal changes to the elements and performance criteria. New evidence requirements for assessment including volume and frequency requirements. Removal of pre-requisites Supersedes HLTDT511C

Application

This unit of competency describes the skills and knowledge required to join dental alloys using thermal processes.

This unit applies to work in dental technology.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand Standards and industry codes of practice.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Solder components

1.1 Identify and position component materials accurately to comply with the design and in a manner that enables the optimum join to be made

1.2 Select appropriate solder and flux according to the component materials

1.3 Select appropriate heating methods

1.4 Apply and control solder

1.5 Evaluate each finished join

1.6 Clean, trim, shape and finish components to produce a smooth surface free of sharp edges and irregularities

ELEMENT**PERFORMANCE CRITERIA**

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

2. Weld components

2.1 Identify and position component materials accurately to comply with the design, and in a manner that enables the optimum join to be made

2.2 Select appropriate welding techniques and equipment

2.3 Weld components

2.4 Evaluate each finished weld

2.5 Clean, trim, shape and finish components to produce a smooth surface free of sharp edges and irregularities

Foundation Skills

The Foundation Skills describe those required skills (employability skills, language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No Equivalent Unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTDET010 Join alloy structures

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Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be evidence that the candidate has:

- followed 2 sets of sequenced written instructions and manufacturers' instructions for preparation of materials for joining alloy structures
- used standard precautions and safe work practices to produce 2 soldered or welded joints that exhibit bio-compatibility and optimum mechanical properties
- critically evaluated the 2 joined alloy structures produced to meet technical laboratory and patient requirements, including joint:
 - position
 - strength
 - integrity
 - function.

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the work role. This includes knowledge of:

- Australian/New Zealand Standards, workplace health and safety (WHS) policies, Dental Board of Australia guidelines on infection control, Commonwealth and State/Territory legislation and organisation policies relating to dental laboratory work
- fundamental oral anatomy including:
 - dentition – arrangement of the teeth, naming and coding of teeth

- structures of the oral cavity – hard and soft palate, lateral and posterior borders of the oral cavity, tongue and floor of the mouth
- articulation and occlusion
- dental metallurgy and dental alloys, including noble and non-noble alloys
- finishing methods
- fluxes
- infection control guidelines for the decontamination of completed laboratory work
- orthodontic wires
- soldering and welding techniques including laser welding technology.

Assessment Conditions

Skills must have been demonstrated in a dental laboratory workplace or in a simulated dental laboratory environment that reflects workplace laboratory conditions. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources including:
 - access to work order
 - Dental Board of Australia guidelines on infection control on which the candidate bases the planning process
 - laboratory safety manuals and procedures in line with relevant Commonwealth and State/Territory legislation
 - WHS policies on which the candidate bases the planning process.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

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