



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **HLTDT315D Construct thermoformed bases and appliances**

**Release: 1**

## HLTDT315D Construct thermoformed bases and appliances

### Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTDT315C Construct thermoformed bases and appliances	HLTDT315D - Construct thermoformed bases and appliances	Unit updated in V5. ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. No change to competency outcome.

### Unit Descriptor

#### Descriptor

This unit of competency describes the skills and knowledge required to construct thermoformed bases and appliances such as mouthguards, bleaching trays and orthodontic retainers

All procedures are carried out in accordance with work health and safety (WHS) policies and procedures, current infection control guidelines, Australian and New Zealand Standards, State/Territory legislative requirements and organisation policy

### Application of the Unit

#### Application

This unit applies to work in dental technology

### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

### Pre-requisite units

This unit must be assessed after successful achievement of pre-requisites:

- HLTDT301D Construct models
- HLTDT302D Construct custom impression trays
- HLTDT304D Articulate models and transfer records
- HLTIN301C Comply with infection control policies and procedures
- HLTWHS200A Participate in WHS processes

## Employability Skills Information

### Employability Skills

This unit contains Employability Skills

## Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in *italics* are elaborated in the Range Statement.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Prepare model

1.1 Interpret prescription

1.2 Mark outline and scribe finishing lines where applicable

1.3 Apply block-out material as required

**ELEMENT****PERFORMANCE CRITERIA****2. Thermo-form appliance or base from blank**

- 2.1 Select thermo-forming material in accordance with the prescription and *appliance* to be constructed
- 2.2 Select *thermo-forming equipment* according to material
- 2.3 Apply heat to material to ensure that blank has been uniformly softened
- 2.4 Adapt softened material to cast ensuring adaptation is uniform with constant thickness as specified by manufacturer
- 2.5 Allow material to cool
- 2.6 Verify adaptation

**3. Trim, shape and finish appliances or bases**

- 3.1 Remove thermo-formed blank
- 3.2 Trim to outline and fit to model
- 3.3 Refine outline
- 3.4 Smooth and finish appliance or base

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

#### *Essential knowledge:*

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Applied oral anatomy
  - articulation and occlusion
  - 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
  - teeth - form and function
- Infection control guidelines for the decontamination of completed laboratory work
- work health and safety (WHS) policies and procedures
- Polymer science
- Relevant material science for carrying out procedures
- Thermoforming technology

#### *Essential skills:*

It is critical that the candidate demonstrate the ability to

- Consistently trim, polish, finish and evaluate thermo-formed appliances for suitability for insertion in the mouth
- Consistently comply with current infection control guidelines, Australian Standards and legislative requirements as they relate to the dental technician's specific job role
- Consistently comply with work health and safety (WHS) policies and procedures as they relate to the dental technician's specific job role

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

## REQUIRED SKILLS AND KNOWLEDGE

This includes the ability to:

- Consistently follow work health and safety (WHS) policies and procedures
- Consistently follow sequenced written instructions and manufacturer specifications for the preparation of materials
- Critically evaluate all work produced so as to consistently meet both the technical requirements of the laboratory and client requirements
- Select appropriate materials and techniques to manufacture thermo-formed appliances, taking into account efficient use of power and other resources
- Use safe work practices to minimise the risk of transmission of infection including:
  - consistently following the procedure for washing and drying hands
  - consistently putting into practice clean techniques
  - consistently using personal protective equipment
  - consistently limiting contamination
  - consistently maintaining clean receiving and work areas
- Use literacy skills to read and follow directions, policies and procedures including:
  - work health and safety (WHS) policies and procedures
  - infection control policies and procedures
  - material safety data sheets
  - laboratory policies and procedures

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

*Critical aspects for assessment and evidence required to demonstrate this competency unit:*

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Consistency of performance should be demonstrated over the required range of workplace situations

## EVIDENCE GUIDE

### *Context of and specific resources for assessment:*

- Assessment should replicate workplace conditions as far as possible
- Where, for reasons of safety, access to equipment and resources and space, assessment takes place away from the workplace, simulations should be used to represent workplace conditions as closely as possible

### *Method of assessment*

- Evidence of essential knowledge and understanding may be provided by:
  - traditional or online (computer-based) assessment
  - written assignments/projects
- Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice
- Questioning
- Staff and/or client feedback
- Supporting statement of supervisor
- Authenticated evidence of relevant work experience and/or formal/informal learning
- Role play/simulation

### *Access and equity considerations:*

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

*Thermo-formed appliances may include:*

- Mouthguards
- Bleach trays
- Occlusal splints
- Baseplates
- Temporary crown stents
- Retaining devices
- Custom impression trays
- Orthodontic retainers
- Implant surgical guides

*Thermo-forming equipment may include:*

- Vacuum
- Pressure

## Unit Sector(s)

Not Applicable