



**Australian Government**

# **MSMPCII299 Make an object from plastic**

**Release: 1**

# MSMPCII299 Make an object from plastic

## Modification History

Release 1. Supersedes and is equivalent to MSAPCII299A Make an object from plastic

## Application

This unit of competency covers the skills and knowledge required to make a component from plastic in accordance with the requirements of an established design in a simulated or trial manufacturing environment where there is a high degree of supervision. The work may or may not involve plastics processing machinery.

This unit of competency applies to learners seeking practical skills that are relevant and useful to the area in which the learner hopes to gain employment, is currently working, and/or as a pathway to further study.

This unit of competency applies to a learning and assessment environment where access to normal production operations is not available. Typically this will be a VET in Schools delivery environment but it may be another simulated or trial manufacturing environment where a high degree of supervision exists. Students may be on work placement.

The unit should be applied to a specific 'project' or task which has a defined beginning, middle and end, occurs over an extended period of time, and is relevant to the manufacturing industry.

When delivered/assessed as part of a qualification the unit must be customised to ensure its relevance to real or simulated work activities and related workplaces.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Nil

## Competency Field

Manufacturing pathways

## Unit Sector

## Elements and Performance Criteria

Elements describe the essential outcomes

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

- |   |  |     |   |
|---|--|-----|---|
| 1 | Identify job requirements              | 1.1 | Identify specifications for plastic product from work instructions                                      |
|   |  | 1.2 | Interpret product specification to determine the process, tools, equipment and materials required       |
|   |  | 1.3 | Identify assembly and finishing requirements  |
|   |  | 1.4 | Identify work health and safety (WHS) and environmental hazards, and implement hazard control measures  |
|   |  | 1.5 | Identify materials, housekeeping, waste management requirements and personal protective equipment (PPE) |
| 2 | Prepare for work                       | 2.1 | Check equipment requirements and adjust equipment to appropriate process settings                       |
|   |  | 2.2 | Check and adjust material requirements  |
|   |  | 2.3 | Keep records according to workplace requirements  |
|   |  | 2.4 | Complete pre-start checks of equipment  |
| 3 | Operate equipment to produce component | 3.1 | Start up equipment following workplace and hazard control procedures                                    |
|   |  | 3.2 | Monitor the process to ensure quality   |
|   |  | 3.3 | Monitor the product quality   |
|   |  | 3.4 | Identify and rectify quality and other problems   |
| 4 | Complete work                          | 4.1 | Assemble the product according to specifications  |
|   |  | 4.2 | Check completed work against specifications and customer requirements                                   |
|   |  | 4.3 | Return unused materials to storage and deal with waste and scrap following workplace procedures         |
|   |  | 4.4 | Clean the work area and return tools and equipment to storage   |

#### 4.5 Complete documentation following workplace procedures.

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

### A plastic product

A plastic product includes one or more of the following:

- small container
- picture frame
- toys
- tool box
- automotive plastic products
- household items
- electrical goods
- playground equipment
- small boat
- any other product made from polymers

### Plastic processing techniques

Plastic processing techniques include one or more of the following:

- injection moulding
- blow moulding
- thermo forming
- composite
- extrusion
- fabrication
- rotational moulding
- other plastic processing methods

**Work instructions**

Work instructions include one or more of the following:

- job sheets
- patterns
- plans
- drawings and sketches
- verbal or illustrated directions from supervisor
- number and type of objects to be produced
- quality requirements
- WHS requirements

**WHS requirements**

WHS requirements include one or more of the following:

- equipment safety instructions
- hazardous and dangerous goods codes
- local safe operating procedures
- specific workplace rules regarding personal protective wear and equipment
- environmental controls
- risk assessment
- emergency procedures

**Suitable work area**

A suitable work area includes one or more of the following:

- on-site host company maintenance or tooling workshop
- simulated workshop in Registered Training Organisation (RTO)
- on-site production facilities

**Appropriate tools, equipment and materials**

Appropriate tools, equipment and materials include one or more of the following:

- manual saw
- jigsaw
- hacksaw
- clamp
- hammer
- mallet
- screw driver
- punch
- pliers and pincers

- file
- miter cutter
- 90 degree angle
- staple gun
- paintbrush
- rags
- measuring tapes/ rulers
- spirit level
- bevel
- chisel
- rollers/scissors
- electric saw
- electric sander
- electric screw driver
- power drills
- vertical drill presses
- pedestal grinders
- plastics processing equipment
- plastics welders such as hot air guns, ultrasonic
- injection moulders/blow moulders/rotational moulding equipment/thermoforming equipment
- plastics raw material
- extruded plastic sheeting (e.g. Perspex, acrylic and polycarbonate)
- adhesives
- screws
- bolts
- glue
- hinges and metal fasteners
- sandpapers
- primers
- paints

## Potential hazards

Potential hazards include one or more of the following:

- broken or faulty equipment
- unnoticed sharp objects
- poor lighting
- inadequate ventilation
- inadequate attention to the activities of others
- electrical shortages and power overload
- disorganised or cluttered workspace (poor

housekeeping)

- poor attention when dealing with tools and equipment
- environmental chemicals, heat, dust, noise, gas and oil
- hot equipment and materials
- cuts
- back strain

## **Workplace records**

Workplace records include one or more of the following:

- plant and maintenance records
- set-up, date, batch and materials
- check sheets
- reporting requirements
- documenting equipment and/or material defects
- workplace procedures relating to the use of tools and equipment
- equipment booking forms and records
- attendance records
- quality reports
- production reports
- log sheets

## **Specifications**

Specifications include one or more of the following:

- measurements and dimensions
- shape
- joining methods
- quality standard
- materials to be used
- appearance
- colour/finish

## **Joining plastic**

Joining plastic includes one or more of the following:

- glue
- ultrasonic/hot air welding
- clips
- metal fasteners ( e.g. screws, bolts and rivets)

## **Rectifying non-conformities**

Rectifying non-conformities includes one or more of the following

- disassembly of the item
- reshaping, resizing or re-cutting component materials
- reassembly
- refinishing
- adjusting process conditions

**Finishing work**

Finishing work includes one or more of the following:

- sanding
- priming
- painting
- decorating
- assembly
- polishing
- trimming

**Unit Mapping Information**

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**Links**

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>