



**Australian Government**

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

# **PMBPROD282B Assemble mould**

**Revision Number: 1**

## **PMBPROD282B Assemble mould**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit descriptor**

This unit covers the assembling and dismantling of moulds. The competency is typically performed by operators working either independently or as part of a work team.

### **Application of the Unit**

#### **Application of this unit**

This competency applies to operators who are involved in assembling moulds for production of products, typically in the rotational moulding, urethane foam, thermoforming and composites sector. The key factors are the selection of correct mould parts, assembling of the mould and dismantling of mould after production. It includes:

- checking job sheets for work to be done
- setting up moulds
- dismantling moulds and replacing worn parts
- maintaining mould part stock controls.
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### **Licensing/Regulatory Information**

Not applicable.

## Pre-Requisites

### Prerequisites

This unit has **no** prerequisites.

## Employability Skills Information

### Employability Skills

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

| ELEMENT                                                          | PERFORMANCE CRITERIA                                                                                                                                                               |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes of a unit of competency | Performance Criteria describe the required performance needed to demonstrate achievement of the Element.<br>Assessment of performance is to be consistent with the Evidence Guide. |

## Elements and Performance Criteria

| <b>ELEMENT</b><br><b>ELEMENT</b>    | <b>PERFORMANCE CRITERIA</b><br>Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.                                                                                                                                                                         |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Check work requirements.         | 1.1 Identify the type of product required.<br>1.2 Check for any special requirements.<br>1.3 Recognise mould parts required.<br>1.4 Interpret mould and part dimensions.<br>1.5 Check with supervisor/appropriate person if requirements are not in accordance with usual practice.                                                                                                    |
| 2. Assemble mould.                  | 2.1 Select and check required mould parts.<br>2.2 Use correct mould set-up jig.<br>2.3 Assemble mould as per procedures.<br>2.4 Check position of mould in relation to rest of machine.<br>2.5 Check mould will open and close.<br>2.6 Apply release agent.<br>2.7 Check breather/vent system for safe functioning.<br>2.8 Pack breather/vent system with material to avoid spillages. |
| 3. Dismantle mould.                 | 3.1 Use correct mould dismantling jig.<br>3.2 Dismantle mould as per work instructions.<br>3.3 Strip mould of release agent.<br>3.4 Clean mould to remove contaminants in accordance with procedures.<br>3.5 Dry out mould.<br>3.6 Store mould parts in appropriate place.                                                                                                             |
| 4. Identify and replace worn parts. | 4.1 Identify worn parts.<br>4.2 Check condition of other mould parts.<br>4.3 Replace worn mould parts.<br>4.4 Record details of worn parts.                                                                                                                                                                                                                                            |
| 5. Maintain mould part stocks.      | 5.1 Check stocks of spare parts.<br>5.2 Advise supervisor of stock required, parts used and date of completed mould.                                                                                                                                                                                                                                                                   |

## Required Skills and Knowledge

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

Application of knowledge of the materials, equipment and process sufficient to recognise out of specification products, process problems and materials faults.

Knowledge of organisation procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Application of the knowledge of managing risks using the hierarchy of controls applied to the moulding process. Application of approved hazard control, safety procedures and the use of PPE in relation to handling materials, equipment operation and cleanup.

Knowledge of and skills in the operation of injection moulding equipment and main components sufficient for consistent production of quality products including:

- different mould part types
- types of releasing agents
- role of releasing agents
- procedures
- identifying factors which may affect product quality or production output and appropriate remedies
- distinguishing between causes of problems, such as use of incorrect mould parts, incorrect positioning of mould parts, worn/damaged mould parts.

Competence also includes the ability to:

- plan own work, including predicting consequences and identifying improvements
- identify when the operator is able to rectify faults, when assistance is required and who is the appropriate source for assistance
- identify and describe own role and role of others involved directly in the process.

### Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets, procedures, material labels and safety information as provided to operators.

Writing is required to the level of completing workplace forms.

Basic numeracy is required, eg to determine that two 25 kg bags are needed to make up a requirement for 50 kg.

## 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.

### Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- recognise the importance of material properties and qualities apply approved procedures
- take appropriate action to resolve faults or report faults to appropriate personnel.

Consistent performance should be demonstrated. For example, look to see that:

- production standards are met consistently
- upstream and downstream communication is timely
- effective operating procedures and work instructions are read and interpreted correctly
- problems are identified and appropriate action is taken (ie the problem is fixed or reported)
- all safety procedures are followed.

### **Assessment method and context**

Assessment will occur using industrial mould(s)/equipment and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- on a processing plant, allowing for operation under all normal and a range of abnormal conditions
- in a situation allowing for the generation of evidence of the ability to respond to problems
  - by using a suitable simulation and/or a range of case studies/scenarios
  - through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

### **Specific resources for assessment**

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

## **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. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

**Context**

This competency applies to all work environments and sectors within rotational moulding, polyurethane, composites and thermoforming where moulds are used. It includes the operation of all relevant additional equipment where that equipment is integral to the moulding process.

**Procedures**

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards. These may include:

- assembling cast and prefabricated moulds (typically made from metal or composite materials)
- using hand tools as required
- interpreting production schedules/ work cards as appropriate.

**Tools and equipment**

This competency includes use of equipment and tools such as:

- handling aid such as handcarts, hoists, jigs and gantries
- pedestrian forklifts
- hoists, jigs and gantries
- powered equipment/aids such as sanders and sand blasting equipment
- relevant personal protective equipment.

It does not cover the use of equipment requiring special licences.

**Hazards**

Typical hazards include:

- noise, light, energy sources
- humidity, air temperatures, radiant heat
- stationary and moving machinery, parts or components
- manual handling hazards.

**Problems**

'Respond to routine problems' means 'apply known solutions to a limited range of predictable problems'. Typical process and product problems may include:

- matching moulds to production requirements
- servicing of moulds
- recognising parts requiring replacement
- selecting correct parts for replacement
- using incorrect mould parts
- incorrect positioning of mould parts
- worn/damaged mould parts.
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**Unit Sector(s)**

Not applicable.