



Australian Government

PMBPROD246 Hand mix materials

Release: 1

PMBPROD246 Hand mix materials

Modification History

Release 1. Supersedes and is equivalent to PMBPROD246C Hand mix materials

Application

This unit of competency covers the skills and knowledge required to hand mix materials in the plastics, rubber and cabling sectors, other than the composites sector.

This unit of competency applies to operators who are required to select materials and equipment, plan and sequence the work, mix ingredients, check conformity to specifications and recognise routine and non-routine problems and take appropriate action.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members, team leader and supervisor, as appropriate.

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

Pre-requisite Unit

Nil

Competency Field

Production

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1	Identify the requirements for hand mixing of materials	1.1	Identify materials to be included in the hand mixing process
		1.2	Identify hand mixing equipment and components used in the mixing process

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| | | 1.3 | Identify characteristics of the blended material produced in relation to the impact on the production process and final product quality |
| | | 1.4 | Compare stages in the mixing process with the quality requirements for the product |
| 2 | Pre-plan hand mixing operations | 2.1 | Identify work requirements from workplace approved operating procedures |
| | | 2.2 | Identify equipment and processes used for materials measurement, preparation, mixing and for the delivery of material to production area |
| | | 2.3 | Identify materials, including base raw materials and required additives |
| | | 2.4 | Identify hazards connected with materials and process from observation of workplace reference materials, including safety data sheets (SDS) and equipment instructions |
| | | 2.5 | Identify appropriate measures to minimise risks from the identified hazards |
| | | 2.6 | Plan task sequences within scope of authority |
| 3 | Check hand mixing set-up | 3.1 | Identify equipment information, required quality specifications and standard operating procedures (SOPs) |
| | | 3.2 | Check materials for conformity with workplace operational requirements |
| | | 3.3 | Discard non-conforming materials or make adjustments to blending operations in accordance with workplace procedures |
| | | 3.4 | Identify changes in materials at each stage of the blending process |
| 4 | Conduct hand mixing operations | 4.1 | Monitor hand mixing operations noting materials quantity and product quality |
| | | 4.2 | Make adjustments to remedy faults and non-conformity |

- to product blend standards, where applicable
- 4.3 Move materials to point of use and pour in the appropriate manner
 - 4.4 Collect and reuse material which is able to be reprocessed and deal with waste and scrap in accordance with workplace procedures
 - 4.5 Complete equipment clean-up and waste management in accordance with workplace procedures
- 5 **Respond to product quality improvement requests**
- 5.1 Monitor hand mixing process and note conditions which may affect product quality standards
 - 5.2 Report process variations within workplace procedures
 - 5.3 Note and implement authorised changes in SOPs and specifications
- 6 **Respond to routine problems to procedures**
- 6.1 Recognise known faults that occur during the operation
 - 6.2 Identify and take action on causes of routine faults
 - 6.3 Log problems as required
 - 6.4 Identify non-routine process and quality problems and take appropriate action

Foundation Skills

This section describes those required 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.

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.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace and hazardous materials
- Australian/international standards relevant to the materials being used and products being made
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- emergency procedures
- work instructions
- SOPs
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Tools and equipment Tools and equipment will be selected as required from:

- measurement equipment
- hand carts and trolleys
- basic hand tools required for opening of material packaging

- hoists/lifting equipment not requiring any special permits or licences
- mixing spatulas or paddles
- portable electrical paddle mixers
- relevant personal protective equipment (PPE).

Hazards

Hazards must be identified and controlled. Identifying hazards requires consideration of:

- weight, shape, volume of materials to be handled
- hazardous products and materials
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- heat, smoke, dust, vapours or other atmospheric hazards
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- equipment failures
- machinery, equipment and product mass
- other hazards that might arise.

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of:

- incorrect material composition
- over or under mixing
- broken mixing equipment
- temperature variations
- variations in materials
- contamination of materials
- variations in setting times.

Known solutions are drawn from one or more of:

- procedures
- training
- remembered experience.

Non-routine problems must be reported according to according to relevant procedures.

Unit Mapping Information

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Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>