



Australian Government

PMBPROD253 Operate an internal mill blender

Release: 1

PMBPROD253 Operate an internal mill blender

Modification History

Release 1. Supersedes and is equivalent to PMBPROD253C Operate an internal mill blender

Application

This unit of competency covers the skills and knowledge required to operate an internal mill blender and ancillary equipment that is integral to the process. Internal mill blenders, such as Intermix and Banbury machines, are typically used to prepare rubber compounds for production processes, such as calendering, extrusion and ultimately tyre building, moulding, rubber lining, roller building and conveyor belt manufacture.

This unit of competency applies to operators who are required to collect materials, check materials to ensure no contamination, weigh and add materials to the mill according to recipe, operate the equipment 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 | Check work requirements | 1.1 | Identify work requirements from production plan or request (recipe card) |
| | | 1.2 | Check equipment and materials including base raw materials, additives and curatives and accelerators meet requirements for job |
| | | 1.3 | Plan task sequences according to procedures, including noting times for checks of product quality |
| | | 1.4 | Identify non-conformity in materials |
| | | 1.5 | Recognise requirements which may not be in accordance with usual practice |
| | | 1.6 | Ask questions of appropriate person to confirm unusual practice |
| | | 1.7 | Identify hazards associated with the job and take appropriate action |
| | | 1.8 | Perform other pre-operational checks in accordance with procedures |
| 2 | Check process set-up | 2.1 | Check safety gates and guards are in position and working |
| | | 2.2 | Check materials are correct |
| | | 2.3 | Check control panel to ensure all variable settings are within procedures guidelines |
| | | 2.4 | Complete pre-start checks. |
| 3 | Weigh materials | 3.1 | Check scales are zeroed correctly |
| | | 3.2 | Minimise dust and rubbish in scales and feed mechanisms |
| | | 3.3 | Accurately weigh powders, rubber, etc, according to computer display, digital readout or other means, |

- according to recipe card
- 3.4 Adjust rubber feed to ensure correct quantity delivered
- 4 **Operate equipment to procedures**
- 4.1 Start machine safely and correctly in accordance with procedures
- 4.2 Check to ensure mixing is occurring appropriately according to equipment operating temperature, speed, amperages and pressures
- 4.3 Monitor control panel in accordance with procedures
- 4.4 Complete logs and records as required
- 4.5 Notify Dump Mill Operators when the cycle is close to completion
- 4.6 Pause machine cycle and perform emergency stop, as required
- 5 **Liaise with dump mill operator**
- 5.1 Advise Dump Mill Operator that compound/batch is being made
- 5.2 Ensure that batch is sampled and correctly labelled
- 5.3 Communicate any non-routine process or product events to required personnel
- 6 **Respond to routine problems in accordance with 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, equipment and production processes 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
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulae/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Tools and equipment Tools and equipment include:

- internal mill blending equipment
- ancillary equipment that is integral to the process.

Additional tools and equipment will be selected as required from:

- bung spanners and other hand tools
- bale hooks
- hoists/lifting equipment not requiring any special permits or licences
- manual handling aids, such as hand carts and trolleys
- relevant personal protective equipment (PPE).

Hazards

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

- restricted spaces
- weight, shape, volume of materials to be handled
- hazardous products and materials
- knives, blades and cutting tools
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- rotational equipment or vibration
- high temperatures
- 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:

- contamination of materials and/or additives
- non adherence to recipe mix or sequence specifications
- incorrect machine set-up
- inadequate/excessive mixing time
- float pressure
- out-of-specification product
- incorrect quantity of materials and/or additives.

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

Release 1. Supersedes and is equivalent to PMBPROD253C Operate an internal mill blender

Links

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