



Australian Government

Assessment Requirements for PMBPROD306 Prepare and start equipment for production

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMBPROD306B Prepare and start equipment for production

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and demonstrate the ability to:

- read and interpret procedures, job specifications, instruments/control panels, material labels and safety data sheets (SDS)
- set up and adjust machine control system to produce product to specification, including one or more of:
 - basic controls
 - open loop
 - closed loop
 - shot size and correction capacity
 - speed/cycle time
 - screw position
 - equipment/process pressure
 - clamp pressure
 - time
 - screw speed
 - screw back pressure
 - screw back time
 - melt decompress position
 - sprue break
- start up process and monitor key variables, including:
 - equipment condition
 - set up variables
 - product measurements
 - product integrity and general conformance to specification
- make adjustments to process to:
 - remedy faults and nonconformity
 - establish a stable process
 - establish balance with upstream and downstream processes
- give instructions to the operator and handover over the machine
- safely shut down equipment in normal and abnormal circumstances
- identify hazards and apply relevant hazard controls
- apply safety procedures
- apply housekeeping procedures
- apply waste management procedures
- recognise early warning signs of equipment/processes needing attention or with potential problems
- distinguish between causes of problems, including:
 - operational problems
 - instrument failure/malfunction
 - electrical failure/malfunction
 - mechanical failure/malfunction
 - wrong readings
 - equipment design deficiencies

- polymer properties
- process variables
- recognise and prioritise problems requiring action
- resolve non-routine problems
- communicate effectively with team/work group and supervisors
- complete workplace records
- do basic arithmetical manipulations, including additions, subtractions, divisions, fractions and percentages.

Knowledge Evidence

Must provide evidence that demonstrates knowledge relevant to their job sufficient to operate independently and to solve routine and non-routine problems, including knowledge of:

- function and operating principles of machine and components
- products, materials and material characteristics
- behaviour of materials in relation to key process variables
- quality requirements at each production stage
- function of and readings from measuring instruments, including one or more of:
 - levelling
 - thermocouples
 - pyrometers
 - transducers
 - thermometers
 - pressure gauges
 - vacuum gauges
 - flow meters
- purpose and operation of safety interlocks and systems, including one or more of:
 - limit switches
 - normally open/normally closed
 - overstroke control systems
 - hydraulic temperature control
 - material temperature control
 - machine guards
 - nozzle purge guard
 - mould protection systems
 - ejection limit switches
- impact of machine operating parameters on product quality and production output
- factors which may affect product quality or production output and appropriate remedies
- polymer properties and their interactions with process conditions
- impact of variations in raw materials and equipment operation in relation to final product
- routine and non-routine problems that may arise, the range of possible causes and appropriate actions
- organisation procedures relevant to the work environment/job role
- hierarchy of control
- hazards that may arise in the job/work environment and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real project in an operational workplace. Where this is not possible or where personal safety or environmental damage are limiting factors assessment must occur using a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from demonstration of skills and one or more of:
 - walk-throughs
 - pilot plant operation
 - industry-based case studies/scenarios
 - ‘what ifs’.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition the assessor or anyone acting in subject matter expert role in assessment shall demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they shall assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions

- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on the job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Links

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