



Australian Government

PMAOPS450 Solve colour problems

Release: 1

PMAOPS450 Solve colour problems

Modification History

Release 1. Supersedes and is equivalent to PMAOPS450B Solve colour problems

Application

This unit of competency covers the skills and knowledge required to solve colour problems identified by internal and/or external customers. It applies to any colour problem, examples include:

- batches during manufacture do not conform to colour specification
- colour as supplied to customer does not conform
- colour as applied to substrate does not conform
- colour variation within the product
- colour was initially satisfactory but has changed over time.

This unit of competency applies to senior technicians or those in similar roles who are required to apply in-depth knowledge of process and plant in order to gather and analyse data, determine the cause of the problem and recommend a solution to the problem.

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

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1	Assist customer to articulate problem	1.1	Clarify customer perception of problem
		1.2	Assess opportunities for a targeted response to meet customer needs

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| | | 1.3 | Identify the rights and responsibilities of the customer and effectively communicate these to the customer |
| | | 1.4 | Clarify the history of the problem |
| | | 1.5 | Define problem and complete records |
| 2 | Analyse possible problem causes | 2.1 | Examine the colour of the object/surface |
| | | 2.2 | Compare colour to standard to determine if colour faulty |
| | | 2.3 | Determine potential causes if colour faulty |
| | | 2.4 | Analyse history of problem for potential causes |
| | | 2.5 | Question customer to clarify issues revealed by examination |
| | | 2.6 | Take samples and arrange for tests as appropriate |
| | | 2.7 | Determine range of possible causes consistent with data available |
| | | 2.8 | Determine most likely cause of defined and observed problem |
| 3 | Satisfy customer needs | 3.1 | Determine appropriate strategies and activities to resolve problem |
| | | 3.2 | Negotiate proposed solution with customers and other relevant parties |
| | | 3.3 | Identify potential areas of difficulty in customer service delivery and take actions to address them |
| | | 3.4 | Follow items initiated through until final resolution has occurred |
| | | 3.5 | Meet customer needs within the scope of area of responsibility |
| | | 3.6 | Report problems outside area of responsibility to designated person |
| | | 3.7 | Follow procedures where a decision is made to terminate a service |

3.8 Complete reports to procedure

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.

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, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (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 HSE requirements, the HSE requirements take precedence.

Routine problems Routine problems are predictable problems with known solutions and include one or more of the following:

- wrong colourant
- wrong colourant amount
- incorrect processing/mixing/dispersing
- incorrect substrate preparation (e.g. of painted/printed surface)
- incorrect application (e.g. of paint/ink)
- incorrect colour measurement and testing
- defect standard
- process changes and variations

Non-routine problems Non-routine problems are unexpected problems, or variations of previous problems and must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person

Operational knowledge includes one or more of the following:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people

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

Procedures are written, verbal, visual, computer-based or in some other form, include one or more of the following:

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

Product Product includes anything produced by a process step and so includes:

- intermediate products, such as the product from one process step, which then becomes the feed for another

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>

Assessment Requirements for PMAOPS450 Solve colour problems

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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 include the ability to:

- communicate effectively with internal and external customers to obtain all relevant information and negotiate a solution
- isolate the causes of problems and distinguish between causes of colour variations, including:
 - materials errors
 - processing errors
 - faulty surface preparation/application
- discriminate differences in hue, value and chroma (or colour/tone, lightness/shade and saturation)
- recognise colourant addition and colourant dispersion differences
- make judgements based on:
 - perceptibility
 - acceptability/tolerance
 - grade 1, 2 or 3 match as required by specification.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- colour and the interaction of colour components during processing and in application
- impact of weathering/aging on colour as appropriate to the product
- causes and remedies of common colour problems
- communication and negotiation techniques.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operations

- will typically include a supervisor/third-party report focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
- must include the use of products which may have colour problems
- may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting 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 one or more of:
 - walk-throughs
 - pilot plant operation
 - demonstration of skills
 - industry-based case studies/scenarios
 - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- 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 must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must 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.

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