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## Overview

This standard identifies the competences you need to obtain materials and to maintain control of material stock for the implementation of engineering activities, in accordance with approved procedures. You will be required to apply appropriate methods and approaches for specifying and obtaining the materials. You will also be required to develop a stock control system to maintain supplies of material for the engineering activity.

Your responsibilities will require you to comply with organisational policy and procedures for obtaining the materials and for developing appropriate stock control procedures for the engineering activities. You will be expected to report any problems with the activities that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work with a minimum of supervision, taking personal responsibility for your own actions and for the quality and accuracy of the work that you carry out.

You will be expected to have underpinning knowledge that will include evaluation methods for assessing the operational requirements. Your underpinning knowledge will provide a good understanding of your work and will provide an informed approach to obtaining materials and maintaining stock controls for the specified engineering activities. You will understand the engineering processes within your area of responsibility, and will have a working knowledge of quality assurance, resource management and problem solving principles and procedures, in adequate depth to provide a sound basis for carrying out your activities to the required standard.

You will be aware of any company, legislative or regulatory health, safety and environmental requirements applicable to the engineering activities for which the materials are being obtained. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and others in the workplace.

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## Performance criteria

### *You must be able to:*

1. work safely at all times, complying with health and safety legislation, regulations, directives and other relevant guidelines
2. ensure that you have all the necessary information to determine the material requirements, and that the information is up to date
3. correctly extract all necessary data in order to carry out the required activities
4. use the information collected to determine the suppliers and their methods of supply
5. control the delivery and receiving of the engineering materials
6. make plans to ensure that materials are checked on arrival
7. maintain adequate stock levels using suitable procedures
8. arrange for material to be stored in an appropriate location and environment
9. identify and deal with any problems which may influence the control/availability of the materials

## Knowledge and understanding

### *You need to know and understand:*

1. how to access information on health and safety regulations and guidelines relating to the engineering activities to be used and the materials required
2. the implications of not taking account of legislation, regulations, standards and guidelines when determining material requirements
3. how to obtain information on the engineering activities, the materials and stock requirements, and the type of information that is available (such as customer requirements and instructions, quality control requirements, product specification, material specifications)
4. the types of material used in the engineering activities (such as raw materials, consumable materials, bought-in specific components and general engineering stock items)
5. how to obtain stock control information, delivery and storage requirements
6. how to check the validity of documentation used in the material control planning activities
7. the organisational procedures that should be used when obtaining materials
8. the organisational requirements for selecting suppliers
9. the organisational requirement for storing and moving materials
10. how to access and use the appropriate information and documentation systems
11. organisation procedures for access to purchase orders and other relevant technical documentation
12. the methods used to determine how material will be delivered (such as quantity, container, frequency)
13. the methods for determining stock replenishing, and how to maintain this level
14. the factors to be considered when determining the storage of materials, especially those factors relating to working conditions and safety
15. the methods used to determine quantities, and the appropriate container(s) required to transport materials
16. the issues that could occur when obtaining and moving materials, and how to resolve them
17. the obvious (and hidden) costs of obtaining materials and maintaining stock, especially those that have to be contracted out
18. the development of the material control documentation (to include both master documents and supplier instructions, along with their purpose)

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19. the process used in the organisation to validate the control procedures produced
  20. the procedures for changing suppliers, material requirements, and why control procedures are used
  21. the importance of maintaining records on material control; what needs to be recorded and where records are kept
  22. the importance of providing the right information at the right time
  23. the roles and responsibilities of key personnel in your organisation
  24. problems that can occur when obtaining materials or maintaining stock, and how these problems can be overcome
  25. the extent of your own authority, and whom you should report to in the event of problems that you cannot resolve
  26. the sources of technical expertise if you have problems that you cannot resolve
  27. the organisational procedures for providing information to different people

## Scope/range

1.

Carry out all of the following during the material handling and controlling activities:

- 1.1 adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment and other relevant safety regulations
- 1.2 exercise care and control over the documentation at all times
- 1.3 collect relevant information on the stock requirement, delivery method and storage facilities
- 1.4 seek out additional information, where there are gaps or deficiencies in the information obtained
- 1.5 ensure that all lifting and handling equipment and accessories are safe to use, and are within their current certification dates
- 1.6 ensure that all materials are stored safely and correctly, as appropriate to their type and, where appropriate, to recommended or health and safety requirements
- 1.7 return all documentation and equipment to the correct location on completion of the activities

2.

Control three of the following types of materials:

- 2.1 raw materials (such as sheet, bars, castings, wafers)
- 2.2 general stock items (such as mechanical fasteners)
- 2.3 bought-in components (such as bearings, electrical or electronic components)
- 2.4 safety items (such as gloves, goggles, barrier creams, clothing)
- 2.5 consumable materials (such as lubricants, packaging, IPA, process gases, process chemicals, cassettes)

3.

Control materials for one of the following engineering activities:

- 3.1 manufacturing activities (such as machining, detail fitting, fabrication of components, pressing)
- 3.2 material processing activities (such as heat treatment, casting, injection moulding, purification, test, implant, etch, deposition)
- 3.3 composite manufacture (such as wet lay-up, pre-preg laminating, resin infusion, blow moulding)
- 3.4 finishing activities (such as stripping finishes, painting, plating, anodising, veneering, lacquering, polishing, photolithography)
- 3.5 assembly activities (such as mechanical, structural, fluid power, electrical/electronic, woodworking)
- 3.6 installation activities (such as mechanical, electrical/electronic, avionic, structural, environmental equipment)
- 3.7 plant and equipment (such as site preparation, plant layout, equipment changeover, equipment replacement)
- 3.8 equipment capability studies/performance measurement
- 3.9 maintenance activities (such as replacement of components, repair activities, general servicing)

- 3.10 research and development (including testing and trialling)
- 3.11 safety and environmental engineering
- 3.12 quality control/quality assurance
- 3.13 commissioning/decommissioning

4.

Use relevant information, during the material stock control activities, from two of the following sources:

- 4.1 specifications
- 4.2 memos
- 4.3 works orders
- 4.4 material requisitions
- 4.5 purchase orders
- 4.6 stores stock level documentation
- 4.7 planning documentation
- 4.8 standard operating procedures
- 4.9 contracts
- 4.10 manufacturing department
- 4.11 computer controlled system

5.

Maintain the material and stock control system, using one of the following:

- 5.1 just-in-time
- 5.2 stock level replacement
- 5.3 customer request
- 5.4 monitored response
- 5.5 date order replenish
- 5.6 contact order system
- 5.7 electronic ordering

6.

Initiate the preparation of resources/purchase of materials using two of the following organisational procedures:

- 6.1 ordering procedures
- 6.2 finance control procedure
- 6.3 authorisation procedures
- 6.4 organisation procurement procedure
- 6.5 planning department control procedure
- 6.6 planning of inventory
- 6.7 requesting emergency inventory

7.

Distribute materials, taking into account all of the following:

- 7.1 information on material requisition/route cards
- 7.2 type and specification of material
- 7.3 timing of the delivery
- 7.4 location of delivery
- 7.5 how the materials are to be presented (such as cut to size, weighed in

batches, counted out)

7.6 quantity of material required (such as total quantities, quantity per delivery, quantity per container)

7.7 type of container to be used

7.8 handling requirements

8.

Receive materials into stock, to include carrying out four of the following:

8.1 carrying out quality checks

8.2 carrying out quantity checks

8.3 creating suitable storage space

8.4 arranging material handling (such as lifting, transportation, use of automated storage system)

8.5 completing all relevant documentation and material stock control records (such as manually or electronically)

9.

Carry out all the following on completion of the material stores control activities:

9.1 validation and evaluation of the material stores control systems and procedures used

9.2 suggested improvements to the process for storing materials

9.3 recommendations for improvements or changes to the stores control systems and procedures in place

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Obtaining and controlling materials for engineering activities



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