

COGPPRO35

Unit 35: Carry Out Testing Operations within Polymer Processing and Related Operations



Overview

This unit is for those with responsibility for carrying out routine testing activities. Tests can be one-off and are conducted following set procedures. They involve some operator control of test variables and checks on the test environment. A series of discrete tests may be required to provide the breadth and depth of the results needed. Contexts could involve lone working on site or where the operator has sole responsibility for the testing process.

This unit deals with the following:

1. Establish requirements for testing
2. Prepare for testing
3. Prepare test sample
4. Conduct routine tests
5. Record test results

During this work you must take account of the relevant worksite operational requirements, procedures and safe working practices as they apply to you.

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Performance criteria

- You must be able to:*
- P1 Select the appropriate testing methods from standard procedures
 - P2 Identify the **conditions** for testing
 - P3 Identify hazards and assess risks against testing requirements
 - P4 Confirm the properties to be tested
 - P5 Prepare the appropriate testing equipment
 - P6 **Check** to ensure that testing equipment is in a serviceable condition and in calibration
 - P7 Ensure that all required **resources** are available and correctly prepared
 - P8 Select the appropriate materials and correctly prepare them according to **test requirements**
 - P9 Carry out checks to ensure that the correct sample has been selected
 - P10 Ensure the identity of the sample is established, its **integrity** is checked and it is stored correctly until required
 - P11 Use and handle samples safely in accordance with safety requirements adopting **standard operating procedures**
 - P12 Ensure that the equipment used to prepare the sample is operated in accordance with **standard operating procedures**
 - P13 Confirm the relevant **controlled conditions** for sample preparation
 - P14 Prepare test samples in accordance with **standard operating procedures**
 - P15 Ensure that all waste material is dealt with appropriately
 - P16 Carry out tests following **standard operating procedures**
 - P17 Record any deviations from set procedure or anticipated results and take **action** in accordance with company procedures
 - P18 Take into account the effects of the test on the **immediate environment** and the environment on the test
 - P19 Clean the equipment and materials to be re-used and store them appropriately
 - P20 Handle and dispose of other equipment and materials safely and correctly
 - P21 Restore the working area to an appropriate condition
 - P22 Ensure test variables are controlled or remain within acceptable limits
 - P23 Make adjustments during the conduct of the test to ensure the required conditions are maintained to achieve a valid outcome
 - P24 Evaluate results and make recommendations
 - P25 Complete the correct **documentation** and store in accordance with **standard operating procedures**
 - P26 Identify safety, health and environmental requirements and work safely at all times, complying with health and safety, environmental and other relevant **regulations and guidelines**

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Knowledge and understanding

You need to know and understand:

- K1 The specific organisational health, safety and environmental policies and other **regulations, legislation and guidelines** for your work area and why they are important
- K2 The different types potential **hazards**, how they can be minimised and the action to take in the event of a work area hazard
- K3 What the workplace procedures are for reporting potential **hazards** you are unable to deal with
- K4 When, which and how personal protective equipment should be used
- K5 The importance of checking equipment, how to do this and to whom you should report defects
- K6 What risks are associated with the working environment
- K7 What risk control measures are in place and how to comply with them
- K8 Where to find **work procedures** and production requirements and how to interpret these
- K9 What sort of documents are kept and how to complete them and the implications of not maintaining them accurately and legible
- K10 The importance of disposing of waste **materials** safely and how to do this
- K11 The sorts of **problems** that might occur and who you should report these to
- K12 The purpose and importance of **quality assurance** checks, and when and how these should be carried out
- K13 What the approved codes of practice are and why it is important to follow them
- K14 Why it is important to follow safe operating procedures when using equipment and/or materials
- K15 What the principles and procedures for testing are
- K16 What the purposes of testing are, and the specific use to which the test results are to be put
- K17 What the relevant testing methods that can be used to achieve the purpose of testing are
- K18 What methods can be used for controlling test variables
- K19 What the concepts of repeatability and reproducibility are
- K20 What equipment should be used for testing, and how to choose the most appropriate equipment
- K21 What the potential impact of the test on health, safety and the environment is
- K22 Why calibration is important and how to check calibration
- K23 How to identify defective equipment and the appropriate action to take
- K24 How to check the sample identity and its integrity
- K25 What methods of sample preparation can be used

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- K26 What methods can be used for dealing with the handling, storage and disposal of materials
- K27 What cleaning materials and methods of use should be used
- K28 What the methods of safe storage that can be used are
- K29 How to evaluate results
- K30 The reporting procedure in the event of deviations
- K31 How to deal with deviations and who to report this to
- K32 What methods can be used to calculate test results
- K33 What the acceptable range of test results is
- K34 What the standard recording and reporting procedures to use are
- K35 What documentation should be used and why it is important to complete it accurately

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Additional Information

Glossary

1. **Regulations/Legislation/Guidelines:** organisational procedures and guidelines, Work place Policies, Health, safety and environmental requirements and regulations relevant to the work and work area being carried out
2. **Problems:** those you can deal with directly, those which require the assistance of another operator to solve, those which you need to report and seek specialist assistance, those with an obvious probable cause, those with two or more possible causes, those with no obvious cause
3. **Hazards:** and control measures: waste, spillage, obstructions use of tools, hazardous materials. personal protective equipment, equipment, lifting and moving items
4. **Materials:** residual materials that can be recycled, waste materials for disposal
5. **Operating Procedures/Work Procedures:** Work instructions, Method Statements, Standard Operating Procedures
6. **Standard operating procedures:** relevant organisational requirements, instructions, departmental procedures, codes of practice, organisational regulations, in house procedures, British, European and International standards
7. **Conditions** to be identified: test environment; test criteria; safety factors; time recording systems; cleanliness and external influences giving rise to variations
8. **Test(ing) requirements:** conducting an analysis of a sensitive material, matching against physical or chemical standards, measurement of shear strength parameters, spectroscopy/chromatography
9. **Documentation:** test plan and equipment requirements and inventories; calibration documentation; appropriate standard operating procedures, appropriate finished test sheets; standard operating procedures supported by performance reports, pass/fail sheets, test records and quality assurance results, documentary proof of safe disposal of hazardous waste
10. **Check(s)** on testing equipment: calibration; serviceability; cleanliness and preparation
11. **Resources:** materials; equipment including personal protective

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equipment; utilities; available time

12. **Controlled conditions** to be established: health and safety; environment; time; recording systems; cleanliness; external influences giving rise to variations
13. **Integrity** to be checked: free from subsequent defects, damage and decomposition; homogeneity. *The term sample may include specimens*
14. **Action**: action taken relating to either materials, personnel and /or equipment within the limits of your responsibility
15. **Immediate environment**: operations; people; conditions under which test is conducted
16. **Information** to be recorded: relevant information concerning: sample identification; results of tests; calculations and data processing; conditions of test
17. **Quality assurance** that will be determined by: The nature of the equipment being maintained, company policy, company national or international standards

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