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### Overview

This standard is about interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and equipment and preparing and installing injected/blown, placed, mechanically or adhesively fixed, and sprayed insulation to cold roofs and insulation to access hatches, pipes, tanks and cylinders in roof areas

This standard is for people working in the occupational area of insulation and building treatments and can be used by operatives, supervisors and managers

**Performance criteria**

- You must be able to:
- P1 interpret the given information relating to the work and resources to confirm its relevance
  - P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
  - P3 select the required quantity and quality of resources for the methods of work
  - P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
  - P5 comply with the given contract information to carry out the work efficiently to the required specification
  - P6 complete the work within the allocated time, in accordance with the programme of work

**Knowledge and understanding**

**Performance Criteria 1**

**Interpretation of information**

You need to know and understand:

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

**Performance Criteria 2**

**Safe work practices**

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **health and safety control equipment** should be used
- K9 how to comply with environmentally responsible work practices to meet current **legislation and official guidance**

**Performance Criteria 3**

**Selection of resources**

You need to know and understand:

- K10 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K11 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K12 the organisational procedures to select **resources**, why they have been developed and how they are used
- K13 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

**Performance Criteria 4**

**Minimise the risk of damage**

You need to know and understand:

- K14 how to **protect work** from damage and the purpose of protection
- K15 why **disposal of waste** should be carried out safely and how it is achieved

**Performance Criteria 5**

**Meet the contract specification**

You need to know and understand:

- K16 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K17 how **maintenance** of tools and equipment is carried out

**Performance Criteria 6**

**Allocated time**

You need to know and understand:

- K18 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

**Additional Information**

**Scope/range related to performance criteria**

**Performance Criteria 1**

- 1 interpretation of drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and data sheets related to the work to be carried out

**Performance Criteria 2**

- 2 avoidance of risk by complying with the given information relating to the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment and work platforms
  - 2.4 safe use, storage and handling of materials, tools and equipment
  - 2.5 specific risks to health

**Performance Criteria 3**

- 3 selection of resources associated with own work
  - 3.1 materials, components and fixings
  - 3.2 tools and equipment

**Performance Criteria 4**

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation

**Performance Criteria 5**

- 7 demonstration of work skills to measure, mark out, calculate, cut, fit, position and secure
- 8 use and maintain hand tools, installation equipment, portable power tools and ancillary equipment
- 9 prepare and install insulation to cold roofs using at least two of the following methods in compliance with current regulations and to given work instructions
  - 1.1 injected/blown
  - 1.2 placed
  - 1.3 mechanically or adhesively fixed
  - 1.4 sprayed
- 10 prepare and install insulation to the following in compliance with current regulations and to given working instructions
  - 1.5 pipes
  - 1.6 tanks and/or cylinders
  - 1.7 access hatches
- 11 carry out pre and post installation checks

**Performance Criteria 6**

- 12 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

**Scope/range related to knowledge and understanding**

**Disposal of waste**

- 1 environmental responsibilities, organisational procedures, manufacturers' information and data sheets, statutory regulations and official guidance

**Emergencies**

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
  - 2.1 fires, spillages, injuries
  - 2.2 emergencies relating to occupational activities

**Hazards**

- 3 those identified by risk assessment, method of work, manufacturers' technical information and data sheets, statutory regulations and official guidance

**Health and safety control equipment**

- 4 identified by the principles of prevention for occupational use, types and purpose of each type, work situations and general work environment
  - 4.1 collective protective measures
  - 4.2 personal protective equipment (PPE)
  - 4.3 respiratory protective equipment (RPE)
  - 4.4 local exhaust ventilation (LEV)

**Information**

- 5 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and data sheets, and current regulations governing buildings

**Legislation and official guidance**

- 6 this relates to the operative's responsibilities regarding potential accidents, health hazards and the environment whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

**Maintenance**

- 7 operative/technician care of hand tools, portable power tools, installation process equipment and ancillary equipment

**Methods of work**

- 8 application of knowledge for safe and healthy and environmental work practices, procedures and skills relating to the method/area of work and materials used to
  - 8.1 understand the implications of existing guarantees and warranties
  - 8.2 recognise the procedures to check flues and combustion air ventilation
  - 8.3 protect access routes
  - 8.4 remove obstructions and store
  - 8.5 remove unwanted insulation from roof area
  - 8.6 carry out pre-installation checks to include common infestations, protected species, structural integrity, dampness, vents, services (gas, electric water, media cables)
  - 8.7 check adequacy of ventilation and increase if required
  - 8.8 recognise the potential risk of increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete)
  - 8.9 ensure all work to services (gas, electric, water, media cables) is carried out by suitable qualified people
  - 8.10 check for hidden utilities
  - 8.11 identify insulation materials and their characteristics for cold roofs, pipes, storage tanks, cylinders and access hatches
  - 8.12 prepare and install injected/blown, placed, mechanically or adhesively fixed and sprayed insulation to cold roofs
  - 8.13 minimise the effects of thermal bridging
  - 8.14 insulate up to and under existing walkway boards
  - 8.15 check serviceability and provision of walkway boards
  - 8.16 prepare and fix pipe, tank and cylinder insulation
  - 8.17 ensure the insulation is contained within the prescribed areas
  - 8.18 insulate downlighters to the required specification
  - 8.19 ensure insulation around electrical apparatus will not create fire hazards (light fittings and cables)
  - 8.20 restrict or reduce unwanted heat loss (down lights and other fittings)
  - 8.21 maintain fire resistant barriers where appropriate
  - 8.22 insulate access hatches
  - 8.23 provide advice to preserve the integrity of the insulation (insulation data sheet and warning labels)

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- 8.24 recognise when specialist skills and knowledge are required and report accordingly
- 8.25 recognise specific requirements for structures of special interest, traditional construction (pre 1919) and historical significance
- 8.26 use hand tools, installation equipment, portable power tools and ancillary equipment
- 8.27 work at height
- 8.28 work in confined spaces
- 8.29 use access equipment and work platforms
- 9 team work and communication
- 10 needs of other occupations associated with installing insulation to cold roofs

**Problems**

- 11 those arising from information, resources, methods of work and building conditions
  - 11.1 own authority to rectify
  - 11.2 organisational reporting procedures

**Programme**

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

**Protect work**

- 14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

**Resources**

- 15 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist
  - 15.1 insulation, pipe insulation, tank and cylinder jackets, fixings and ancillary items
  - 15.2 hand tools, installation equipment, portable power tools and ancillary equipment
- 16 methods of calculating quantity, length, depth, area and wastage associated with the method/procedure to install loft insulation

**Security procedures**

- 17 site, workplace, vehicles, company and operative/technician

## COSVR451 – SQA Unit Code HL64 04

### Install insulation to cold roofs

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**Developed by** ConstructionSkills

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