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## Overview

This standard is about preparing for and injecting, blowing and spraying insulation to roof, floor, wall and ceiling structures of contained frame and open framed components (including loft conversions or building extensions) interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and installation equipment

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

## Performance criteria

### *You must be able to:*

**P1** interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition for the following:1.1 drawings1.2 specifications1.3 schedules1.4 method statements1.5 risk assessments1.6 manufacturers' information1.7 data sheets

**P2** comply with the given, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices relating to the following:2.1 methods of work2.2 safe use of health and safety control equipment2.3 safe use of access equipment and harness systems2.4 safe use, storage and handling of materials,

tools and equipment

2.5 operative maintenance of installation equipment2.6 specific risks to health including mental health2.7 specific risks associated with ventilation and

combustion appliances

**P3** select the required quantity and quality of resources for

the methods of work3.1 check the suitability, compatibility and characteristics of the materials, components, fixings and finishes and determine

if they are moisture open or moisture closed and their impact

on the building3.2 record and report issues or defects3.3 select tools and equipment

*\*P4 \** comply with organisational procedures to minimise the risk

of damage to the work and surrounding area by:4.1 protecting the work and its surrounding area from damage4.2 maintaining a safe, clear and tidy work area4.3 disposing of waste in accordance with current legislation

**P5** comply with the given contract information to carry out the

work efficiently to the required specification by the following:5.1 demonstrate work skills

to, remove, measure, calibrate,

mark out, cut, line, level, drill, fit, fix, fill, finish, position and

secure

5.2 carry out external and internal pre-installation check, assessing, recording and reporting issues to include:

- suitable access
- property suitability

- structural integrity

- dampness

- decay

- vents and ventilation

- services (gas, electric, water, media cables)

5.3 use and maintain all work tools and installation equipment

5.4 remove existing defective insulation, boarding, breather

membranes and vapour control layers

5.5 assemble and operate installation processing equipment in line with manufacturers and system manuals

5.6 prepare for and install insulation to framed sections of roof, floor, wall or ceiling structures, contained frame or open frame, to given working instructions, using at least one of the following methods

- injected
- blown
- sprayed

5.7 calibrate equipment to measure density, flow and quality tests

to ensure they are in line with manufacturers specifications and

material requirements

5.8 remove defective timber, localised plaster and render

5.9 fix finishing board, sheathing board and plasterboard

5.10 make good any marks or screw and nail holes

5.11 fit insulation between and/or to timber and metal studwork

5.12 clean and disassemble installation processing equipment and

pack away for transportation

5.13 carry out post installation checks to ensure insulation complies

with the design

5.14 hand over and sign off to the customers satisfaction

**P6** complete your work within the estimated, allocated time

and performance requirements of the system design, method

statement and the required standard

## Knowledge and understanding

*You need to know and understand:*

### **Performance Criteria 1 Interpretation of information**

K1. why organisational procedures have been developed and how they are implemented

K2. types of information, their source, accuracy, completeness

and how they are interpreted in relation to: 2.1 drawings 2.2 specifications 2.3 schedules 2.4 method statements 2.5 risk assessments 2.6 design 2.7 standards 2.8 suppliers and manufacturers' information 2.9 data sheets 2.10 official guidance 2.11 current legislation and regulations governing buildings

K3. the importance of organisational procedures to solve problems and why it is important to follow them

### **Performance Criteria 2 Safe work practices**

K4. the information for relevant, current legislation, standards and official guidance and how it is applied

K5. the types of fire extinguishers and how and when they are used in relation to water, CO<sub>2</sub>, foam, powder

K6. how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to:

6.1 fires, spillages, injuries 6.2 emergencies relating to occupational activities 6.3 identification of and reporting of asbestos containing materials

K7. the organisational security procedures for tools,

equipment and personal belongings in relation to: 7.1 site 7.2 workplace 7.3 siting and location of vehicles 7.4 company 7.5 customer 7.6 access equipment 7.7 material and waste storage 7.8 the general public

K8. how to report risks and hazards identified by the following:8.1 risk assessment8.2 personal assessment8.3 methods of work8.4 manufacturers' technical information8.5 data sheets8.6 statutory regulations8.7 official guidance8.8 Control of Substances Hazardous to Health (COSHH)

K9. the accident reporting procedures and who is responsible for making the report

K10. why, when and how health and safety control equipment

identified by the principles of prevention should be used in

relation to:10.1 collective protective measures10.2 personal protective equipment (PPE)10.3 respiratory protective equipment (RPE)10.4 local exhaust ventilation (LEV)

K11. environmentally responsible work practices to meet current

legislation, standards and official guidance when dealing with

potential accidents, health hazards and the environment in

relation to:11.1 confined spaces11.2 at height11.3 tools and equipment11.4 materials and substances11.5 movement and storage of materials by manual handling and

mechanical lifting

### **Performance Criteria 3 Selection of resources**

K12. why the characteristics, compatibility, quality, uses,

sustainability, limitations and defects associated with the

resources are important and how defects should be rectified

K13. the organisational procedures to select resources, why they

have been developed and how they are used

K14. how to confirm the resources and materials conform with the

specification

K15. how the resources should be used and how any problems

associated with the resources are reported in relation to: 15.1 protective sheeting 15.2 masking materials 15.3 warning signs 15.4 public protection equipment 15.5 insulation materials 15.6 sheathing board 15.7 timber and metal studwork 15.8 breather membranes and vapour control layers 15.9 fire stops 15.10 acoustic treatments 15.11 plasterboard or finishing board 15.12 vent sleeves 15.13 down lighters 15.14 primers 15.15 expansion and movement joints, compression joints 15.16 metal lath and plaster beads 15.17 seal tapes and joints 15.18 joint strips and mesh 15.19 plaster finish 15.20 sealants 15.21 pre-formed trims 15.22 all work tools and installation equipment

K16. how to identify the hazards associated with the resources and methods of work and how they are overcome

K17. how to calculate the quantity of materials required and used

to ensure, adequacy of fill as per system designer specification

and wastage associated with the method and procedure inject,

blow or spray insulation to framed sections of buildings

#### **Performance Criteria 4 Minimise the risk of damage**

K18. the importance of protecting the work and its surrounding

area against the risk of damage

K19. how to protect work and its surrounding area from damage by

general workplace activities, other occupations and adverse

weather conditions and how to minimise damage to existing

building fabric

K20. why and how the disposal of waste must be carried out safely

in accordance with the following  
 20.1 current legislation  
 20.2 environmental responsibilities  
 20.3 organisational procedures  
 20.4 suppliers and manufacturers' information  
 20.5 data sheets  
 20.6 statutory regulations  
 20.7 official guidance

K21. why it is important to maintain a safe, clear and tidy work

area

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Performance Criteria 5 **Meet the contract specification**

K22. how the methods of work to meet the specification, are carried

out and how problems are identified and reported by the

application of knowledge for safe, healthy and

environmental work practices, procedures and skills relating

to the method and area of work

22.1 the suitability, compatibility and characteristics of the materials,

components and finishes, and determine if they are moisture

open or moisture closed, their impact on the building and

their appropriateness to the design and physical application

22.2 how to record and report issues or defects with the materials,

components and finishes

22.3 why it is important to explain installation procedure to building

occupants to include but not limited to the following: - scope and work

programme - safety requirements during the installation process - protection of

property and personal items - specific benefits and implications to include

homeowner

information - agreed standards of making good

22.4 how to work with, around and in close proximity to plant and machinery

22.5 how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment

22.6 how to identify and follow the installation quality requirements

22.7 how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation

22.8 why it is important to carry out external and internal pre-installation checks

22.9 how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include:

- suitable access
- property suitability
  - structural integrity
- dampness,
- decay
- vents and ventilation
- services (gas, electric, water, media cables)

22.10 why it is important to ensure that all necessary repairs are completed prior to installation

22.11 how to identify when specialist skills and knowledge are required and report accordingly including but not limited to:

- fire safety
- acoustics

- condensation analysis

- electrical
- gas
- asbestos
- Radon
- rot
- heritage
- architectural features
- ecology
- ventilation

22.12 the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance

22.13 how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal

bypassing and water ingress, inadequate ventilation and condensation risk

22.14 weather restrictions of the frame materials when temporarily exposed to the elements

22.15 the implications of existing guarantees and warranties that may be compromised by the installation to include but not

limited to:           - blocked and restricted ventilation           - windows and door  
replacement       - firestops           - weather seals           - silicone weather proof  
coatings

22.16 how to protect adjacent surfaces

22.17 how to check for and protect hidden utilities

22.18 how to remove wall fixtures including but not limited to: light switches, radiators, down lighters, handrails, as necessary to install the insulation in accordance with the specification, design, drawings and method statements

22.19 how to prepare and remove existing wall lining, defective insulation, boarding, breather membranes and vapour control layers

22.20 how to remove defective timber, localised plaster and render

22.21 how to fix any holes, broken or damaged boards that form the backdrop for fixed insulation.

22.22 how to identify and report the existence of thermal bridges

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and water ingress not addressed in the design

22.23 how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects

22.24 how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements

22.25 how to inject, blow and spray insulation between and or to timber and metal studwork

22.26 how to ensure insulation thickness and type meets the design specification for fire, thermal and acoustic requirements

22.27 how to fit breather membrane and vapour control layer in conjunction with design, maintaining their integrity

22.28 how to fix finishing board, sheathing board and plasterboard in conjunction with design

22.29 how to apply mastic aesthetic sealant to all interface, joints and penetrations

22.30 how to make good any marks or screw and nail holes

22.31 how to scrim and tape joints ready for surface finish

22.32 how to reinstate fixtures and fittings

22.33 the different types of air and vapour control layers and

breather membranes, where and how they should be used  
and why it is important to install them correctly

22.34 the importance of ensuring the integrity of air and vapour  
control layers and breather membranes following installation  
and the need to maintain continuity

22.35 why it is important to record and report unforeseen events  
including but not limited to equipment malfunctions,  
situations and faults not identified in the original design

22.36 how to clean and disassemble installation processing  
equipment and pack away for transportation

22.37 why it is important to complete post installation checks in  
accordance with the design, method statement and  
installations operations manual and report issues to include  
but not limited to safeguarding the combustion ventilation  
and report defects

22.38 how to handover and sign off to the customers' satisfaction

22.39 how to use all work tools and installation equipment

22.40 how to work at height using access equipment and harness  
systems

22.41 how and why maintenance of all work tools and equipment is  
carried out

K23. the importance of team work and communication

K24. the needs of other occupations associated with injecting,

blowing and spraying insulation to framed sections of

buildings

**Performance Criteria 6 Allocated time**

K25. the programme of the work to be carried out including the

estimated and allocated time and why deadlines should be

kept

K26. the types of progress charts, timetables and estimated times

and the organisational procedures for reporting circumstances

which will affect the work programme

COSVR819

Inject, blow or spray insulation to framed sections of buildings



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