

## Spray insulation to suspended floors

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### Overview

This standard is about preparing and spraying insulation to suspended floors, interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and 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

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### 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 drawings
- 1.2 specifications
- 1.3 schedules
- 1.4 method statements
- 1.5 risk assessments
- 1.6 manufacturers' information
- 1.7 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 work
- 2.2 safe use of health and safety control equipment
- 2.3 safe use of access equipment and harness systems
- 2.4 safe use, storage and handling of materials,

tools and equipment

- 2.5 operative maintenance of installation equipment
- 2.6 specific risks to health including mental health
- 2.7 specific risks associated with ventilation (inside the property and

under floor) and also including combustion appliances

- 2.8 specific risks associated with working in confined spaces

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

the methods of work

- 3.1 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 building

- 3.2 record and report issues or defects
- 3.3 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 damage
- 4.2 maintaining a safe, clear and tidy work area
- 4.3 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 measure, mark out, calculate, cut, fit,

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fill, position, secure and make good

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 recognise, record and report the key issues that may inhibit

commencement of the work including but not limited to:

- condition of building fabric
- identification of any areas of potential water penetration
- visibility and completeness of damp proof course
- condition of window and door seals
- height of internal floors in relation to external floor height
- drainage and down pipes
- protection and existence of sub floor ventilation

5.4 identify the potential risk of increased condensation following

installation relating to suspended floors and how to prevent it

5.5 check, record and report issues with under floor (cross flow)

ventilation, flues, chimneys and combustion air ventilators pre

and post installation

5.6 prepare floor for insulation creating access points taking into

consideration the following but not limited to:

- safe systems of work
- minimising damage
- checking existing services
- building construction and heritage significance
- customer safety

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- 5.7 check for hidden utilities
- 5.8 maintain integrity of membranes
- 5.9 remove and minimise damage to floorcoverings
- 5.10 ensure the minimum void area air space is maintained by removing debris
- 5.11 clear and safeguard existing and install additional in accordance with the design and installation checks and report back issues which impact the ventilation assessment
- 5.12 protect the building occupants and their property
- 5.13 confirm pre-installation material checks are within specified parameters to include checking and reporting defects
- 5.14 rectify defects in preparation of insulation measures
- 5.15 assemble, operate, clean and disassemble installation processing equipment
- 5.16 calibrate equipment to measure density, flow and quality tests
- 5.17 spray insulation to suspended floors
- 5.18 maintain existing sound-proofing
- 5.19 install and maintain fire resistant barriers
- 5.20 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

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the combustion ventilation and report defects

5.21 provide post installation advice and guidance to building

occupants including homeowner packs

5.22 handover and sign off to the customers satisfaction

5.23 clean and disassemble installation processing equipment and

pack away for transportation

5.24 use all work tools and installation equipment in line with

manufacturers and system specifications

5.25 work at height using access equipment

**P6** complete your work within the estimated, allocated time  
and performance requirements of the system design, method  
statement and the required standard

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### 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 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. relevant, current legislation, standards and official guidance and how they are 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

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K8. how to report risks and hazards identified by the following:  
 8.1 risk assessment  
 8.2 personal assessment  
 8.3 methods of work  
 8.4 manufacturers' technical information  
 8.5 data sheets  
 8.6 statutory regulations  
 8.7 official guidance  
 8.8 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 measures  
 10.2 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 below ground level  
 11.2 confined spaces  
 11.3 at height  
 11.4 tools and equipment  
 11.5 materials and substances  
 11.6 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

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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 warning signs 15.3 temporary barriers 15.7 making good materials 15.8 filling materials 15.9 sealants 15.10 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 the system designer

specification and wastage associated with the

method and procedure to spray insulation to suspended floors

### **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 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 carry out external and internal pre-installation checks

22.4 how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to:

- suitable access
- property suitability
- structural integrity

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- dampness
- decay
- vents and ventilation
- services (gas, electric, water, media cables)

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

22.6 how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited

to:

- condition of building fabric
- identification of any areas of potential water penetration
- visibility and completeness of damp proof course
- condition of window and door seals
- height of internal floors in relation to external floor height
- condition of roof
- damaged and spalled brickwork
- rain and waste water goods
- protection and existence of sub floor ventilation
- wall cavity width and identification of any debris

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

- fire safety
- electrical
- asbestos
- Radon
- heritage
- architectural and archaeological features
- ecology
- ventilation
- exposure and topography

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22.8 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

22.9 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

22.10 why it is important to avoid unintended consequences

22.11 how to check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre and post installation

22.12 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

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

limited to:

- timber treatments
- replacement wall ties
- injected damp proof course
- under floor and central heating systems
- Radon barriers
- electrical wiring
- services

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22.14 how to identify and follow the installation quality

requirements

22.15 how to work with, around and in close proximity to plant and

machinery

22.16 how to direct and guide the operations and movement of

plant and machinery to ensure protection of a safe working

environment

22.17 why it is important to recognise the potential risk of increased

condensation following installation relating to suspended

floors and how to prevent it

22.18 how to prepare a floor for insulation, creating access points

taking into consideration the following but not limited to:

- safe systems of work	- minimising damage	- checking existing services	- building construction and heritage significance	- customer safety	- archaeology
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22.19 how to check for hidden utilities

22.20 the importance of ensuring all work to services (gas, electric,

water) is carried out by suitably qualified people

22.21 how to maintain the integrity of membranes

22.22 how to remove and minimise damage to floorcoverings

22.23 why it is important to ensure the minimum void area air space

is maintained by removing debris as required

22.24 why it is important to clear and safeguard existing and install

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additional ventilation if required in accordance with the design

and installation checks and report back issues which impact

the ventilation assessment

22.25 how to protect the building occupants and their property

22.26 how to assemble, operate, clean and disassemble installation

processing equipment

22.27 how to calibrate equipment to measure density, flow and

quality tests

22.28 how to spray insulation to suspended floors

22.29 how to ensure pre-installation material checks are within

specified parameters to include checking and recording batch number and  
reporting defects

22.30 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

22.31 the importance of ensuring the integrity of air and vapour

control layers and breather membranes following installation

and the need to maintain continuity

22.32 why it is important to immediately record and report

unforeseen events including but not limited to equipment

malfunctions, situations and faults not identified in the

original design

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22.33 how to ensure existing cross flow ventilation is maintained within the floor void

22.34 how to maintain existing sound-proofing

22.35 how to install and maintain fire resistant barriers

22.36 why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated

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 why it is important to provide post installation advice and guidance to building occupants including homeowner packs

22.39 how to handover and sign off to the customers satisfaction

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

22.41 how to use all work tools and installation equipment in line with manufacturers and system specifications

22.42 how to work at height using access equipment and harness

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systems

22.43 how and why maintenance of all work tools and installation

equipment is carried out

K23. the importance of team work and communication

K24. needs of other occupations associated with spraying insulation

to suspended floors

### **Performance Criteria 6 Allocated time**

K25. the programme of 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

## Spray insulation to suspended floors

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