

Blown insulation to cold roofs

Overview

This standard is about preparing and blowing insulation to cold roofs and to access hatches, pipes, tanks and cylinders in roof areas, 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 and combustion

appliances

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 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 for the following: 5.1

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demonstrate work skills to, measure, mark out, calculate, make good

5.2 carry out pre-installation checks, assessing, recording and reporting issues to include:

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

5.3 use and maintain all work tools and installation equipment in line with manufacturers and system specifications

5.4 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
- condition of roof

5.5 create and protect platforms and walkways for access and storage

5.6 remove and secure building occupants stored items

5.7 identify and remove infested, damaged and contaminated insulation from roof area

- 5.8 identify and install passive ventilation as required by the design and report any identified ventilation limitations
- 5.9 identify and report the potential risk of uninsulated omitted areas in relation to increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete)
- 5.10 check for and protect hidden utilities
- 5.11 identify insulation materials and their characteristics for cold roofs, pipes, storage tanks, cylinders and access hatches
- 5.12 confirm pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects
- 5.13 assemble and operate installation processing equipment in line with manufacturers and system manuals
- 5.14 calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements
- 5.15 install passive ventilation and safeguard existing ventilation
- 5.16 prepare and install blown insulation to cold roofs
- 5.17 prepare and fix pipe, tank and cylinder insulation
- 5.18 ensure the insulation is contained within the prescribed areas

5.19 protect downlighters by installation of fire rated caps to the required specification

5.20 ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables)

5.21 minimise the effects of thermal bridging through compliance with design detail and ensuring a consistent level of insulation to area being insulated

5.23 install and maintain fire resistant barriers

5.24 clean and disassemble installation processing equipment and pack away for transportation

5.25 complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects

5.26 provide post installation advice and guidance to building occupants including homeowner packs, warning labels and data sheets

5.27 work at height using access equipment and harness systems

5.28 handover 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 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, CO₂, 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 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 confined spaces
11.2 at height
11.3 tools and equipment
11.4 materials and substances
11.5 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 insulation 15.2 pipe insulation 15.3 tank and cylinder jackets 15.4 fixings and ancillary items 15.5 access boards 15.6 loft hatches 15.7 soffit and fascia boards 15.8 tile vents 15.9 ridge tiles 15.10 sarking felt vents 15.11 draught-proofing materials 15.12 fire rated caps 15.13 cable protection 15.14 all work tools 15.15 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 to install blown insulation to cold roofs

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 the implications of existing guarantees and warranties that

may be compromised by the installation to include but not limited to:

- timber treatment

- re-wiring
- loft guarantees
- building warranties

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 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 features
- ecology
- ventilation

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22.9 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

22.10 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

22.11 why it is important to avoid unintended consequences

22.12 why it is important 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 - condition of roof

- damaged or spalled brickwork into gable ridge - drainage and down pipes

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

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

22.15 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

22.16 how to identify and follow the installation quality

requirements

- 22.17 how to create and protect walkways and platforms
- 22.18 how to remove and secure stored items
- 22.19 why it is important to identify and remove infested, damaged and contaminated insulation from roof area
- 22.20 how to install passive ventilation as required by the design and report any identified ventilation limitations
- 22.21 how to identify and report the potential risk of uninsulated omitted areas in relation to increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete)
- 22.22 the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people
- 22.23 how to check for and protect hidden utilities
- 22.24 how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects
- 22.25 how to assemble and operate installation processing equipment in line with manufacturers and system manuals
- 22.26 how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements

22.27 how to install passive ventilation and safeguard existing ventilation

22.28 how to prepare and install blown insulation to cold roofs

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

22.30 how to prepare and fix pipe, tank and cylinder insulation

22.31 how to ensure the insulation is contained within the prescribed areas

22.32 how to protect downlighters by installation of fire rated caps to the required specification

22.33 how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables)

22.34 how to install and maintain fire resistant barriers

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

22.36 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

22.37 the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation

and the need to maintain continuity

22.38 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

22.39 why it is important to complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects

22.40 why it is important to provide advice to building occupants including homeowner packs, warning labels and datasheets

22.41 how to handover and sign off to the customers satisfaction

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

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

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

K23. the importance of team work and communication

K24. the needs of other occupations associated with blown insulation to cold roofs

Performance Criteria 6 **Allocated time**

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

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