
Overview

This standard is about energy efficiency measures, methods of construction and common building defects in relation to the installation of insulation and building treatments and involves 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

Performance criteria

You must be able to:

P1 interpret the given design information relating to the work and resources and identify its suitability taking into consideration building type, defects and detailing and recording and reporting issues in regard to interfaces 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 as stated for each measure to be installed

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

P4 comply with organisational procedures to avoid the risk of damage to the work and surrounding area by the following:

- 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 carry out pre-installation checks

(external and internal) in regard to building construction, defects and material interfaces

- 5.2 identify common building defects including but not limited to:
 - salt contamination
 - causes of dampness
 - rain penetration
 - rising damp
 - internal moisture vapour
 - damaged services
 - structural defects

Knowledge and understanding

You need to know and understand:

Performance Criteria 1 Interpretation of information

K1. types of information, their source, accuracy, completeness and how they are interpreted in relation to:

- 1.1 types of construction
- 1.2 energy efficiency measures
- 1.3 building treatments
- 1.4 drawings
- 1.5 method statement
- 1.6 design
- 1.7 standards
- 1.8 manufacturers' information
- 1.9 data sheets
- 1.10 official guidance
- 1.11 current legislation and regulations governing buildings

K2. the importance of organisational procedures to solve problems and why it is important to follow them

Performance Criteria 2 Safe work practices

K3. relevant, current legislation, standards and official guidance and how they are applied

K4. how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to:

- 4.1 fires, spillages, injuries
- 4.2 emergencies relating to occupational activities
- 4.3 identification of and reporting of asbestos containing materials

K5. how to report risks and hazards identified by the following:

- 5.1 risk assessment
- 5.2 personal assessment
- 5.3 methods of work
- 5.4 safe systems of work
- 5.5 manufacturers' technical information
- 5.6 data sheets
- 5.7 statutory regulations
- 5.8 official guidance
- 5.9 Control of Substances Hazardous to Health (COSHH)

K6. the accident reporting procedures and who is responsible for making the report

Performance Criteria 3 Selection of resources

K7. why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified

K8. the organisational procedures to select resources, why they have been developed and how they are used

K9. how to confirm the resources and materials conform with the specification

K10. how the resources should be used and how any problems associated with the resources are reported

K11. how to identify the hazards associated with the resources and methods of work and how they are overcome
 Performance Criteria 4 Minimise the risk of damage

K12. the importance of protecting the work and its surrounding area against the risk of damage

K13. 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

Performance Criteria 5 Meet the contract specification

K14. 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

14.1 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

14.2 how to record and report issues or defects with the materials, components and finishes

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

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

- property suitability
- structural integrity
- dampness
- decay
- exposure ratings
 - vents and ventilation
 - services (gas, electric, water, media cables)
- 14.5 why it is important to ensure that all necessary repairs are completed prior to installation
- 14.6 the implications that types of construction and materials have on the introduction of energy efficiency measures and other forms of building treatments with specific reference to:
 - roofs
 - walls including internal and external finishes
 - floors
 - windows and doors
 - chimneys and fireplaces
 - flues and combustion ventilation
 - fabric interfaces
 - existing

services

14.7 the importance of the correct sequencing of installation of energy efficiency measures and building treatments

14.8 how performance varies in different construction types, locations and through the impact of habitation and usage

14.9 how alterations, additions and extensions to the original construction can affect the performance of the building

14.10 how to identify common building defects including but not limited to: salt contamination and causes of dampness, rain penetration, rising damp, internal moisture vapour, damaged services, structural defects and understand the implications of these when they are present

14.11 how achieving continuity of the insulation and building treatments can prevent problems such as water ingress, poor energy efficiency and thermal bridges, whilst understanding the unique circumstances at party walls and the associated risks to adjacent properties

14.12 how to recognise unintended consequences, why they happen, how to avoid them and the importance of moisture content in external fabric including but not limited to:

- impacts on neighbouring properties
- insulation fitting and placement for different insulation types

- junctions
- thermal bridging and condensation risks
- thermal bypassing
- void ventilation

14.13 the potential causes of mould and fungal decay in buildings and the impact of ventilation and air flow following the installation of thermal efficiency measures

14.14 the implications of building defects and the repairs required and how they will affect the choice of energy efficiency measures and building treatments

14.15 the importance of compatibility and interactions between measures and the fabric of the underlying building

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

- fire safety
- electrical

- gas
- asbestos
- Radon
- heritage
- ecology
- archaeological and architectural features
- ventilation
- dampness and building exposure

14.17 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

-
- 14.18 how your actions can lead to unintended consequences, why they happen, how to avoid them and the importance of reporting them
 - 15 the importance of team work and communication
 - 16 the needs of other occupations associated with IBT building construction, defects and interfaces

Developed by	Construction Skills
Version Number	1
Date Approved	30 Aug 2020
Indicative Review Date	30 Mar 2027
Validity	Current
Status	Original
Originating Organisation	CITB
Original URN	COSVR817
Relevant Occupations	Construction Operatives
Suite	Insulation and Building Treatments (Construction)
Keywords	Energy efficiency measures; Thermal bridging, Thermal bypassing; Void ventilation