

### Overview

This standard is about interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and equipment. It is also about preparing and mixing the following construction related materials: cementitious, plasters, resins, adhesives, bonding agents, colourings, waterproof coatings, grouts and pre-mixed compounds as an individual or team member

This standard is for people working in the occupational area of construction and civil engineering operations and can be used by operatives, supervisors and managers

## COSVR363 – SQA Unit Code HL8M 04

### Prepare and mix construction related materials

#### 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

## COSVR363 – SQA Unit Code HL8M 04

### Prepare and mix construction related materials

#### 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**

## COSVR363 – SQA Unit Code HL8M 04

### Prepare and mix construction related materials

#### 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

## COSVR363 – SQA Unit Code HL8M 04

### Prepare and mix construction related materials

#### Additional Information

#### Scope/range related to performance criteria

#### Performance Criteria 1

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

#### Performance Criteria 2

- 2 avoidance of risk by complying with the given information relating to at least four of the following
  - 2.1 methods of work
  - 2.2 safe use of health and safety control equipment
  - 2.3 safe use of access equipment
  - 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
  - 3.2 tools and equipment

#### Performance Criteria 4

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

#### Performance Criteria 5

- 7 demonstration of work skills to measure, gauge, stir, mix, agitate and blend
- 8 use and maintain hand tools, power tools and equipment
- 9 prepare at least two of the following materials for use to given working instructions
  - 9.1 cementitious
  - 9.2 plasters
  - 9.3 resins
  - 9.4 adhesives
  - 9.5 bonding agents
  - 9.6 colourings
  - 9.7 waterproof coatings
  - 9.8 grouts
  - 9.9 pre-mixed compounds

## COSVR363 – SQA Unit Code HL8M 04

### Prepare and mix construction related materials

#### **Performance Criteria 6**

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

## Prepare and mix construction related materials

### Scope/range related to knowledge and understanding

#### **Disposal of waste**

- 1 environmental responsibilities, organisational procedures, manufacturers' information, 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, Control of Substances Hazardous to Health (COSHH) assessments, methods of work, manufacturers' technical information, 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 local exhaust ventilation (LEV)
  - 4.3 personal protective equipment (PPE)
  - 4.4 respiratory protective equipment (RPE)

#### **Information**

- 5 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, verbal, written and graphical instructions, current regulations and official guidance associated with preparing and mixing construction related materials

#### **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 and storage of materials by manual handling and mechanical lifting

#### **Maintenance**

- 7 operative care of hand tools, power tools and ancillary equipment

## Prepare and mix construction related materials

### Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method and area of work and materials used to
  - 8.1 plan, set out and prepare cementitious materials, plasters, resins, adhesives, bonding agents, colourings, water-proof coatings, grouts and pre-mixed compounds for use
  - 8.2 conform to agreed specifications
  - 8.3 set up, prepare, conduct pre-start checks, start, operate, monitor the operation of and close down specialist mixing machinery and equipment
  - 8.4 recognise types of materials and constituents
  - 8.5 work with, around and in close proximity to plant or machinery and lifting equipment
  - 8.6 monitor and check accuracy during progress and on completion of work
  - 8.7 protect constituents and mixed materials
  - 8.8 identify requirements for quality control including tests
  - 8.9 recognise and determine when specialist skills and knowledge are required and report accordingly
  - 8.10 use hand tools, power tools and equipment
  - 8.11 use access equipment
  - 8.12 team work and communication
  - 8.13 needs of other occupations associated with preparing and mixing construction related materials

### Problems

- 9 those arising from information, resources and methods of work
  - 9.1 own authority to rectify
  - 9.2 organisational reporting procedures

### Programme

- 10 types of productivity targets and time scales
- 11 how times are estimated
- 12 organisational procedures for reporting circumstances which will affect the work programme

### Protect work

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



## COSVR363 – SQA Unit Code HL8M 04

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#### Resources

- 14 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist
  - 14.1 cementitious materials, plasters, resins, adhesives, bonding agents, colourings, waterproof coatings, grouts, pre-mixed compounds
  - 14.2 hand tools, power tools and equipment
- 15 how to confirm resources and materials conform with the given specification
- 16 methods of calculating quantity, length, area, volume and wastage associated with the method and procedure to prepare and mix construction related materials

#### Security procedures

- 17 site, workplace, company and operative

#### Behaviours

When performing to this standard you are likely to demonstrate the following behaviours:

- 1 **Work safely:** consider the safety of yourself and those around you, challenge unsafe behaviour
- 2 **Effective communication:** oral, written, electronic, listening, body language, presentation
- 3 **Respect:** apply equality, diversity and inclusion in dealing with others.
- 4 **Team work:** work effectively and safely with others with limited supervision.
- 5 **Independent working:** take responsibility for safe completion of your own work.
- 6 **Logical thinking:** use clear and valid reasoning when making decisions to safely undertake the work instructions.
- 7 **Working effectively:** undertake the work in a reliable, safe and productive manner.
- 8 **Time management:** use own time effectively to complete the work instructions to schedule, take the time to be safe.
- 9 **Adaptability:** be able to adjust to changes to the work instructions, put safety first

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### Prepare and mix construction related materials

**Developed by** ConstructionSkills

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**Relevant occupations** Elementary Construction Occupations

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**Suite** Construction and Civil Engineering Operations

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**Key words** Cementitious; Plasters; Resins; Colourings; Bonding agents; Waterproofers; Grouting

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