

# COSVR58 (SQA Unit Code - H1RV 04)

## Apply materials to repair concrete



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### Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and repairing degraded concrete structures with cementitious and/or resin compounds

# COSVR58 (SQA Unit Code - H1RV 04)

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### 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 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

# COSVR58 (SQA Unit Code - H1RV 04)

## Apply materials to repair concrete

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### Knowledge and understanding

*You need to know and understand:*

#### Performance Criteria 1

##### Interpretation of information

- 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 and when **personal protective equipment (PPE)** should be used

#### Performance Criteria 3

##### Selection of resources

*You need to know and understand:*

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 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:*

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

# COSVR58 (SQA Unit Code - H1RV 04)

## Apply materials to repair concrete

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*You need to know and understand:*

### **Performance Criteria 5**

#### **Meet the contract specification**

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

*You need to know and understand:*

### **Performance Criteria 6**

#### **Allocated time**

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

# COSVR58 (SQA Unit Code - H1RV 04)

## Apply materials to repair concrete

### Additional Information

#### Scope/range related to performance criteria

#### Performance Criteria 1

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

#### Performance Criteria 2

- 2 safe use of personal protective equipment (PPE) and access equipment to carry out the activity, in accordance with legislation and/or organisational requirements
- 3 safe use and storage of tools and equipment

#### Performance Criteria 3

- 4 selection of resources associated with own work
  - 4.1 materials, components and fixings
  - 4.2 tools and equipment

#### Performance Criteria 4

- 5 protection of the work and its surrounding area from damage
- 6 minimise damage and maintain a clean work space
- 7 disposal of waste in accordance with legislation

#### Performance Criteria 5

- 8 demonstration of work skills to measure, mark out, locate, protect, break out, clean, replace, erect, mix, apply, finish and cure
- 9 use and maintain hand tools, portable power tools and ancillary equipment
- 10 repair degraded concrete to given working instructions
  - 10.1 prepare backgrounds
  - 10.2 apply primers, bonding agents and repair compounds
  - 10.3 replace steel reinforcement
  - 10.4 erect and dismantle shutters
  - 10.5 record and report repairs carried out

#### Performance Criteria 6

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

# COSVR58 (SQA Unit Code - H1RV 04)

## Apply materials to repair concrete

### 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

#### Hazards

- 3 those identified by method of work, manufacturers' technical information, statutory regulations and official guidance

#### Information

- 4 drawings, specifications, schedules, manufacturers' information and regulations

#### Legislation and official guidance

- 5 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

#### Maintenance

- 6 operative care of hand tools and/or portable power tools and ancillary equipment

#### Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
  - 7.1 locate services and protect adjacent areas
  - 7.2 break out defective concrete
  - 7.3 clean concrete and steel
  - 7.4 replace steel reinforcement
  - 7.5 erect and dismantle shutters
  - 7.6 apply primers and bonding agents
  - 7.7 mix and apply repair compounds
  - 7.8 finish and cure
  - 7.9 use hand tools, power tools and equipment
  - 7.10 work at height
  - 7.11 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with repairing degraded concrete structures

# COSVR58 (SQA Unit Code - H1RV 04)

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### **Personal protective equipment (PPE)**

10 occupational use, types, purpose of each type and work situations

### **Problems**

11 those arising from information, resources and methods of work

11.1 own authority to rectify

11.2 organisational reporting procedures

### **Programme**

12 types of progress charts, timetables and estimated times

13 organisational procedures for reporting circumstances which will affect the work programme

### **Protect work**

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

### **Resources**

15 materials, components and equipment relating to types, quantity, quality and sizes of standard and/or specialist

15.1 formwork, repair compounds, aggregates, cements, additives, reinforcement, primers, bonding agents and membranes

15.2 saws, drills, mixers and sprayers

15.3 hand and/or powered tools and equipment

16 methods of calculating quantity, length and area associated with the method/procedure to repair degraded concrete

### **Security procedures**

17 site, workplace, company and operative

## **COSVR58 (SQA Unit Code - H1RV 04)**

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