



Overview

This standard is about interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and equipment, preparing for and manually applying slurry surfacing, high friction, resin bonded, thermal patch repair, crack and joint repair to pavements

This standard is for people working in the occupational area of road building and maintenance and can be used by operatives, supervisors and managers

COSVR383 – SQA Unit Code HM1E 04

Apply specialist pavement surfacing materials manually

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

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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**

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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

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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 the following
 - 2.1 methods of work
 - 2.2 safe use of health and safety control equipment
 - 2.3 safe use, storage and handling of materials, tools and equipment
 - 2.4 specific risks to health

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components and fixings
 - 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, set out, mark, position, dry, clean, mask, prime, seal, mix, heat and decant, spread, cure, inspect and communicate
- 8 use and maintain hand tools, power tools and ancillary equipment
- 9 prepare for and manually apply specialist pavement surfacing materials using at least one of the following surfacing methods to given working instructions
 - 9.1 slurry surfacing, mixing, squeegee operations and protect for the curing process
 - 9.2 high friction (cold applied) mix materials, apply, spread aggregate and protect for the curing process
 - 9.3 high friction (hot applied) heat and mix materials and monitor temperatures, lay, spread aggregate evenly and protect for the curing process
 - 9.4 resin bonded, mixing multi packs, mix materials, squeegee and levelling operations, floating and protect for the curing process
 - 9.5 thermal patch repair heat, remove, rake, mix, compact, level and

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finish and protect for the curing process

- 9.6 crack and joint repair mix, prepare surface and apply, finish and protect for the curing process

Performance Criteria 6

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

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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, 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 personal protective equipment (PPE)
 - 4.3 respiratory protective equipment (RPE)

Information

- 5 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, verbal, written and graphical instructions and current regulations relating to applying specialist pavement surfacing materials manually

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, 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

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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 confirm the area and location of work, the operations, safety and security requirements including temporary traffic management and immediate area protection
 - 8.2 establish an agreed time frame for treatment
 - 8.3 conform to agreed specification
 - 8.4 prepare substrate, to include measuring, setting out, marking out, drying, cleaning and repairing
 - 8.5 prepare equipment to apply specialist pavement surfacing materials manually
 - 8.6 protect and work around street furniture and ironwork
 - 8.7 prepare materials, to include storing, handling and mixing
 - 8.8 apply materials to prepared surfaces, to include heating, pouring, laying, screeding, spreading and floating
 - 8.9 work with, in close proximity to and around plant and machinery
 - 8.10 remove and dispose of arisings
 - 8.11 communicate and co-ordinate progress on specialist treatment
 - 8.12 return infrastructure to operational status
 - 8.13 recognise and determine when specialist skills and knowledge are required and report accordingly
 - 8.14 use hand tools, power tools, pedestrian operated plant and equipment
 - 8.15 work at height
 - 8.16 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with applying specialist pavement surfacing materials manually

Problems

- 11 those arising from information, resources and methods of work
 - 11.1 own authority to rectify
 - 11.2 organisational reporting procedures

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Programme

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

Protect work

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

Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and specialist
 - 16.1 primers, epoxy or thermoplastic resins, bituminous emulsion, catalyst, doping agents, fibres, rubber, pigment and asphalt rejuvenators
 - 16.2 aggregates
 - 16.3 protection and masking materials
 - 16.4 mixer and mixer pot
 - 16.5 pre-heaters and thermal heaters
 - 16.6 hand tools, power tools, pedestrian operated plant and equipment
- 17 identify by calculation, quantity, length, area and wastage associated with the method and procedure to apply specialist pavement surfacing materials manually

Security procedures

- 18 site, workplace, company and operative

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