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**Overview**

This NOS is about identifying substrates including any unrecorded damage, mixing and adjusting the viscosity of fillers and foundation materials, applying fillers and foundation materials.

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## Performance criteria

- You must be able to:
- P1 use the appropriate personal protective equipment when carrying out the preparation and application of **foundation materials**
  - P2 protect the vehicle and its contents effectively when carrying out the preparation and application of **foundation materials**
  - P3 support the preparation and application activities by reviewing:
    - P3.1 **foundation materials** data
    - P3.2 work instructions
  - P4 prepare, test and adjust all the **equipment** required following manufacturer's instructions, prior to use
  - P5 apply the correct type of fillers and stoppers to rectify **substrate defects**, when necessary
  - P6 report any unrecorded damage to **substrates** and ancillary **equipment** to the relevant person(s) promptly and accurately
  - P7 mix all the **foundation materials** required following health and safety requirements and using:
    - P7.1 suitable compatible **materials**
    - P7.2 the approved method
    - P7.3 the approved **equipment**
  - P8 apply all the **foundation materials** required following health and safety requirements and using:
    - P8.1 the approved method
    - P8.2 the approved **equipment**
  - P9 dry and cure **foundation materials** following health and safety requirements and using:
    - P9.1 the approved method
    - P9.2 the approved **equipment**
  - P10 ensure the finished **substrate** is suitable to accept the next process
  - P11 dispose of waste **materials** to conform with legal, environmental and workplace requirements
  - P12 leave all application **equipment** in a clean and serviceable condition and return it to the correct location

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P13 complete all preparation and application activities within the agreed timescale

P14 report any anticipated delays in completion to the relevant person(s) promptly

## Knowledge and understanding

### Legislative and organisational requirements and procedures

#### You need to know and understand:

- K1 the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection
- K2 the importance of disposing of waste appropriately and the consequences of not doing so to others, the business and the environment
- K3 the importance of selecting, using and maintaining the appropriate personal protective equipment when preparing and applying **foundation materials**
- K4 the vehicle work specification agreed
- K5 your workplace procedures for:
  - K5.1 the referral of problems
  - K5.2 reporting of delays to the completion of work
  - K5.3 personal protection
- K6 the requirements for protecting the vehicle and contents from damage before, during and after preparing and applying **foundation materials**
- K7 the importance of working to agreed timescales and keeping others informed of progress
- K8 the relationship between time and cost
- K9 the importance of reporting anticipated delays to the relevant person(s) promptly

### Equipment

#### You need to know and understand:

- K10 how to prepare, test and adjust all the **equipment** required for the preparation and application of **foundation materials**
- K11 how to use viscosity measuring equipment, paint mixing and application equipment, heating and drying equipment, fume and dust extraction, air supply systems, and air fed breathing apparatus
- K12 spray gun faults, their cause and their rectification

### Materials

#### You need to know

- K13 how to prepare **foundation materials**

## and understand:

- K14 the properties of **foundation materials**
- K15 the factors affecting the choice and use of **foundation materials**
- K16 the principles of paint mixing and the importance of the right additive (hardener or thinner) in the correct ratio
- K17 the curing and drying recommendations for various fillers and **foundation materials**

**Preparation and application of foundation materials**You need to know  
and understand:

- K18 how to find, interpret and use sources of information relevant to the mixing and application of foundation coatings
- K19 how to condition and clean **substrates** prior to the application of foundation coats
- K20 how to rectify **substrate defects**
- K21 how to apply foundation coatings
- K22 how to avoid application defects
- K23 how to dispose of waste **materials** following environmental requirements
- K24 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues
- K25 the importance of viscosity and its effect on the **substrate** finish
- K26 the importance of proper cleaning and using the correct foundation material to ensure adequate adhesion of the paint system
- K27 the manufacturer's approved instructions for working when applying **foundation materials**

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**Additional information****Scope/range**

- 1 **Equipment** is:
  - 1.1. viscosity measuring
  - 1.2. paint mixing and application equipment
  - 1.3. paint rollers
  - 1.4. spray booth
  - 1.5. heating and drying equipment
  - 1.6. air fed breathing apparatus
- 2 **Foundation materials** are:
  - 2.1. etch primers
  - 2.2. primer fillers
  - 2.3. primer surfacers
  - 2.4. stoppers
  - 2.5. anti-stone chip treatments
  - 2.6. anti-corrosion treatments
- 3 **Materials** are:
  - 3.1. chemical cleaning agents
  - 3.2. conditioning agents
  - 3.3. dilutants and hardeners
  - 3.4. adhesion promoters
- 4 **Substrate defects** are:
  - 4.1. stone chips
  - 4.2. scratches
  - 4.3. pin holes
- 5 **Substrates** are:
  - 5.1. electro-coated panels
  - 5.2. repaired panels
  - 5.3. original manufacturer's finish
  - 5.4. plastic components

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- 5.5. zinc coated panels
  - 5.6. steel panels
  - 5.7. aluminium panels
  - 5.8. composite panels
  - 5.9. previously primed panels

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