Unit 340 Applying coatings by the air spray method in the workplace

27 credits

Level: 3
UAN: H/503/9733

Unit aim:
The aim is to provide you with the necessary skills and knowledge for:

- interpreting information
- adopting safe and healthy working practices
- selecting and preparing materials and associated equipment
- providing protection to the work area
- assembling and setting up the High Volume Low Pressure (HVLP) air spray systems
- applying coatings with air spray equipment
- cleaning out and maintaining the air spray equipment.

*PER – Portfolio evidence reference SO – Site observation OQ – Oral question WQ – Written question WT – Witness testimony
PS – Product supplementary PD – Professional discussion

Assessment criteria that are practical activities are highlighted in bold.

1. Interpret the given information relating to the work and resources when applying coatings by the air spray method.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
1.1 **interpret and extract relevant information from:**							
a. **specifications**							
b. **current regulations**							
c. **risk assessments**							
d. **method statements**							
e. **manufacturers' information**							

1.2 **comply with information and/or instructions derived from risk assessments and method statements**							
1.3 describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented							
1.4 describe different types of information, their source and how they are interpreted in relation to:							
a. specifications							
b. current legislation							
c. risk assessments							
d. method statements							
e. manufacturers' information							
f. paint sprayer's instructions.							

2. Know how to comply with relevant legislation and official guidance when applying coatings by the air spray method.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
2.1 describe your responsibilities regarding first aid procedures, potential accidents and health hazards, whilst working:							
a. in the workplace							
b. in confined spaces							
c. at height							
d. with tools and equipment							
e. with materials and substances							
f. with movement/storage of materials and by manual handling							
2.2 describe the organisational security procedures for tools, equipment and personal belongings in relation to:							
a. site							
b. workplace							
c. company							
d. operative							
2.3 explain what the accident reporting procedures are and who is responsible for making reports.							

3. Maintain safe and healthy working practices when applying coatings by the air spray method.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
3.1 **use health and safety control equipment and access equipment safely to carry out the activity in accordance with current legislation and organisational requirements when applying coatings by the air spray method**							
3.2 **comply with information relating to specific risks to health when applying coatings by the air spray method**							
3.3 explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to applying coatings by the air spray method, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:							
a. collective protective measures							
b. Personal Protective Equipment (PPE)							
c. Respiratory Protective Equipment (RPE)							
d. Local Exhaust Ventilation (LEV)							
3.4 describe how the relevant health and safety control equipment should be used in accordance with the given instructions							
3.5 state how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with:							
a. fires							
b. spillages							
c. injuries							
d. other task-related hazards (including air injection).							

4. Select the required quantity and quality of resources for the methods of work to apply coatings by the air spray method.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
4.1 **select resources associated with own work in relation to:**							
a. **materials**							
b. **tools and equipment**							
4.2 describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:							
a. water-borne and solvent-borne coatings							
b. masking materials: masking tape, masking paper, dust sheets, masking shield							
c. two pack coatings (base, activator and solvents)							
d. protective sheeting							
e. access equipment							
f. hand tools, film thickness gauges and air spray equipment (high volume low pressure [HVLP]) and ancillary equipment							
4.3 describe how the resources should be used correctly and how problems associated with the resources are reported							
4.4 explain why the organisational procedures have been developed and how they are used for the selection of required resources							
4.5 describe any potential hazards associated with the resources and methods of work							
4.6 describe how to calculate quantity of materials required associated with the method/procedure to apply coatings by the air spray method.							

5. Minimise the risk of damage to the work and surrounding area when applying coatings by the air spray method.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
5.1 **protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures**							
5.2 **minimise damage and maintain a clean work space**							
5.3 **dispose of waste in accordance with current legislation**							
5.4 describe how to protect work from damage and the purpose of protection in relation to:							
a. general workplace activities							
b. other occupations							
c. adverse weather conditions							
5.5 explain why the disposal of waste should be carried out safely in accordance with:							
a. environmental responsibilities							
b. organisational procedures							
c. manufacturers' information							
d. statutory regulations and official guidance.							

6. Complete the work within the allocated time when applying coatings by the air spray method.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
6.1 **demonstrate completion of the work within the allocated time**							
6.2 describe the purpose of the work programme and explain why deadlines should be kept in relation to:							
a. types of progress charts, timetables and estimated times							
b. organisational procedures for reporting circumstances which will affect the work programme.							

7. Comply with the given contract information to apply coatings by the air spray method to the required specification.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
7.1 **demonstrate the following work skills when applying coatings by the air spray method:**							
a. **preparing**							
b. **loading**							
c. **protecting**							
d. **measuring**							
e. **assembling**							
f. **positioning**							
g. **securing**							
h. **cleaning**							
i. **communicating**							
7.2 **set up spray equipment (high volume low pressure [hvlp] systems) to achieve the finish stated in the given working instructions, relating to:**							
a. **preparing coatings**							
b. **loading the system**							
c. **monitoring and maintaining supply**							
7.3 **apply water-borne and/or solvent-borne coatings by high volume low pressure [HVLP] air spray systems to given working instructions for the following:**							
a. **broad work**							
b. **linear and structural components**							
7.4 **check wet film thickness (as specified)**							
7.5 **shut down and clean out spray equipment to given working instructions**							
7.6 **safely use materials, hand tools, air spray equipment and ancillary equipment**							
7.7 **safely store the materials, tools and equipment used when applying coatings by the air spray method**							

7.8 describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							
a. establish access requirements							
b. check suitability of previously prepared surfaces							
c. provide protection by sheeting, masking and removing items							
d. assemble component parts to form spraying equipment (High Volume Low Pressure [HVLP] systems)							
e. prepare coatings: single-pack and two-pack systems							
f. load, operate, maintain (during use) and monitor the paint spray equipment							
g. establish air-change requirements in confined areas							
h. assemble, set up, operate and shut down spray equipment							
i. use correct spray gun technique on broad areas, angles, linear items and complex structural features							
7.9 describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							
a. plan the safeguard of operatives and the general public from spraying activities							
b. troubleshoot spray equipment problems							
c. troubleshoot coating problems							
d. measure wet and dry film thickness with gauges							
e. handle coatings that contain activator							
f. shut down, clean and store equipment							
g. identify how atmospheric conditions affect coatings and their application process							
h. identify the working life of prepared materials							
i. use access equipment							
j. use hand tools and ancillary equipment							
7.10 describe the needs of other occupations and how to effectively communicate within a team when applying coatings by the air spray method							
7.11 describe how to maintain the tools and equipment used when applying coatings by the air spray method.							

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Declaration

I confirm that the evidence supplied for the above unit is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

Candidate name:	
Candidate signature:	
Date:	

I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor name:	
Assessor signature:	
Date:	

IQA name:	
IQA signature:	
Date:	