Unit 102 Preparing and mixing concrete and mortars in the workplace

8 credits

Level: 1
UAN: K/503/9457

Unit aim:
This unit aims to provide the learner with the necessary skills and knowledge to:

- interpret information
- adopt safe and healthy working practices
- select materials and equipment
- prepare and mix concrete and mortars

*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. Know how to comply with relevant legislation and official guidance when preparing and mixing concrete and mortars.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
1.1 describe the different types of relevant information used with the method/procedure to prepare and mix concrete and mortars							
1.2 describe their responsibilities regarding potential accidents and health hazards, whilst working:							
a. in the workplace							
b. below ground level							
c. at height							
d. with tools and equipment							
e. with materials and substance							

	f. with movement/storage of materials							
	g. by manual handling and mechanical lifting							
1.3	describe the organisational security procedures for							
	a. tools							
	b. equipment							
	c. personal belongings							
	in relation to							
	a. site							
	b. workplace							
	c. company							
	d. operative							
1.4	state what the accident reporting procedures are and who is responsible for making reports.							

2. Maintain safe and healthy working practices when preparing and mixing concrete and mortars.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
2.1 **use health and safety control equipment safely to carry out the activity in accordance with current legislation and organisational requirements when preparing and mixing concrete and mortars**							
2.2 **comply with information relating to specific risks to health when preparing and mixing concrete and mortars**							
2.3 state why and when health and safety control equipment, identified by the principles of protection, should be used, relating to preparing and mixing concrete and mortars, 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)							
2.4 describe how the relevant health and safety control equipment should be used in accordance with the given instructions.							
2.5 state how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.							

3. Select the required quantity and quality of resources for the methods of work to prepare and mix concrete and mortars.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
3.1 select resources associated with own work in relation to:							
a. materials							
b. components							
c. tools							
d. equipment.							
3.2 describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:							
a. aggregate							
b. sand							
c. lime							
d. cement							
e. water							
f. additives							
g. hand tools							
h. mixing plant and equipment.							
3.3 state how the resources should be used correctly.							
3.4 state how any problems associated with the resources are reported.							
3.5 outline any potential hazards associated with the resources and methods of work.							
3.6 describe how to calculate quantity, volume and wastage associated with the method/procedure to prepare and mix concrete and mortars.							

4. Minimise the risk of damage to the work and surrounding area when preparing and mixing concrete and mortars.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
4.1 **protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.**							
4.2 **minimise damage and maintain a clean work space.**							
4.3 **dispose of waste in accordance with current legislation.**							
4.4 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.							
4.5 state 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							
e. official guidance.							

5. Complete the work within the allocated time when preparing and mixing concrete and mortars.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
5.1 demonstrate completion of the work within the allocated time							
5.2 state the purpose of the work programme							
5.3 state why deadlines should be kept in relation to agreed start and finish times.							

6. Comply with the given contract information to prepare and mix concrete and mortars to the required specification.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
6.1 demonstrate the following work skills when preparing and mixing concrete and mortars:							
a. **gauging and mixing**							
6.2 gauge and mix mortars and/or concrete to given working instructions.							
6.3 safely use:							
a. **materials**							
b. **hand tools**							
c. **mixing plant and equipment**							
d. **ancillary equipment**							
6.4 safely store the materials, tools and equipment used when preparing and mixing concrete and mortars.							
6.5 describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							
a. gauge and mix concrete and mortars by hand and mixer							
b. carry out pre-use checks on mechanical mixers							
c. use hand tools, mixing plant and equipment							
d. work with plant and machinery							
6.6 state the needs of other occupations and how to effectively communicate within a team when preparing and mixing concrete and mortars.							
6.7 describe how to maintain the tools and equipment used when preparing and mixing concrete and mortars.							

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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:	