

PROFFI237 (SQA Unit Code - FE5K 04)

Prepare resources for use in making hand-crafted furniture



Overview

This standard addresses the competence required to prepare the different sorts of resources that will be used in the making of hand-crafted furniture. This involves:

- 1 checking the condition and suitability of materials
- 2 marking out materials
- 3 preparing surfaces
- 4 identifying and preparing different tools and equipment needed for the operations to be carried out
- 5 selecting and preparing wood working adhesives
- 6 working in ways which maintain your own and others' safety

There is also a scope statement which defines the coverage of this standard.

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Performance criteria

Select and prepare equipment, tools and the work area

You must be able to:

- P1 select the correct **tools and equipment** to carry out the work specified
- P2 check and confirm that the **tools and equipment** are in working condition and set aside any that are not
- P3 make sure that the correct **equipment components** are selected and set in place
- P4 make sure that **equipment** is correctly set up for operation and that guards are in place
- P5 select and lay out any workshop devices that will be needed to complete the specified work
- P6 clear and clean adequate working space for the **tools and equipment** to be used and the work to be done
- P7 make sure that **environmental conditions** are suitable for the work to be carried out
- P8 handle **tools and equipment** safely

Select and prepare materials and surfaces

You must be able to:

- P9 organise the **tools** you will need so that you can work effectively and keep your work area tidy
- P10 make sure that you have clear and complete details of the required **materials** and preparations
- P11 select **materials** of the required types and dimensions
- P12 check and confirm that the selected **materials** are free of irregularities and in a suitable condition to be worked on
- P13 determine the face side of the **material** to be used for the best match to:
 - P14 structural requirements;
 - P15 the desired visual effect
- P16 accurately measure the **material** to the required tolerances, keeping wastage as low as possible
- P17 make all markings clearly and cleanly
- P18 use the appropriate **technique** and **tools** to produce the required **surface finish**
- P19 follow safe working procedures and wear the appropriate **personal protective equipment (ppe)** for the **technique** being used
- P20 return **tools** to the correct storage locations when not in use and report any which require maintenance

Select and prepare adhesives

You must be able to:

- P21 wear the appropriate **personal protective equipment (ppe)** for the **adhesive** to be used
- P22 check that the specified **adhesives** are available and in date
- P23 select **adhesives** which match the **specification** characteristics
- P24 ensure that extraction facilities are operating effectively before working with **adhesives** which require you to take this precaution

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- P25 immediately report any problems with extraction and ventilation facilities
- P26 mix the **adhesives** to the specified consistency and in the required volume
- P27 maintain the **adhesives** in the required condition until needed
- P28 deal promptly and safely with spillages and splashes
- P29 follow coshh procedures when handling adhesives
- P30 make sure that unused **materials** are accurately labelled and return them to the designated storage areas
- P31 dispose of wastes safely using designated procedures and disposal areas

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Knowledge and understanding

You need to know and understand:

Select and prepare equipment, tools and the work area

- K1 the different sorts of workshop **tools, equipment** and devices that are used in making wooden furniture by hand
- K2 what to look for when checking the condition of **tools** and **equipment**
- K3 what components are needed to achieve different **specifications** and what the implications are of using the wrong components
- K4 what the implications are of setting up **equipment** incorrectly
- K5 the implications for your work of the HASAWA and COSHH Regulations, including where to find out about relevant risk assessment and control measures that have been set by your organisation

You need to know and understand:

Select and prepare materials and surfaces

- K6 the different sorts of workshop tools and devices that are used in making wooden furniture by hand
- K7 what sorts of materials, tools and techniques are used for making hand-crafted furniture and why
- K8 why the face mark is used, what it is used for and why it relates to the movement of timber
- K9 how to identify the face side of material and why correct and accurate surface preparation is important
- K10 what the growth characteristics are of different hard and soft woods and what implications this has for how to work with them
- K11 what the handling characteristics are of different sorts of wood composites and what implications this has for how to work with them
- K12 how to handle materials without causing damage
- K13 units of measurement used to specify length, width, thickness and performance accuracy and the tolerance levels typically used in hand-crafted furniture
- K14 the implications for your work of the HASAWA and COSHH Regulations, including where to find out about relevant risk assessment and control measures that have been set by your organisation

You need to know and understand:

Select and prepare adhesives

- K15 the different sorts of adhesives that are used in making wooden furniture by hand and what each is used for
- K16 the implications for your work of the HASAWA and COSHH Regulations, including where to find out about relevant risk assessment and control measures that have been set by your organisation
- K17 why it is so important to comply fully with COSHH procedures
- K18 the pot life, shelf life and open time, curing time and clamping time of different adhesives and their implications for your work
- K19 how to tell when the required consistency has been achieved and what actions are needed to keep adhesives in working condition
- K20 what personal protective equipment (PPE) should be worn when handling adhesives and why
- K21 why it is important to deal promptly, safely and correctly with splashes and

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spillages of adhesives

K22 why it is important that waste materials are disposed of safely

K23 who you should report any problems with the extraction and ventilation to

K24 how to dispose of waste in accordance with current legislation

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Additional Information

Scope

Adhesives

There are a range of adhesives in common commercial use within hand-crafted furniture production. They include polyvinyl acetate, urea or phenol formaldehydes, animal based glues, resorcinol, epoxy resins and cyanide acrylic base compounds. Many can pose significant risks to health and safety. These will have been taken account of in the risk assessments and procedures set in place to conform to COSHH legislation and which a competent person will follow in full.

Environmental conditions

The cleanliness, temperature, ventilation and humidity characteristics of the working area.

Materials

The materials used in constructing hand-crafted furniture. These include softwoods (e.g. pine), hardwoods (e.g. mahogany) and wood composites (typically plywood, chipboard and MDF). Materials also include mouldings, fittings, ground work and components such as dowelling used in joint making.

Personal Protective Equipment (PPE)

Ear, eye and respiratory protection as well as protective gloves, overalls, footwear, and barrier, cleansing and after-care cream.

Specifications

Specifications are details as to the work to be carried out and the materials, adhesives, tools, equipment and work area selection and preparations needed.

Surface finish

Smooth, planed and sanded surface finishes will be needed, depending on the intended use of the material within the furniture item.

Techniques

Sawing, planing, sanding and jointing.

Tools and equipment

The chisels, planes, cramps, saws, drills, drill bits, squares, mallets, scrapers, honing stones, knives and measuring devices used in the making of hand-crafted furniture. Also includes powered tools such as sanders, routers, drills and power saws as well as workshop tools and devices such as bench hooks, shooting boards, mitre blocks of different angles, scratch stock.

Drill bits, work holding devices, chucks and key, blades and abrasives.

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Suite Furniture, Furnishings and Interiors

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