

Model Answers

Domain

Furniture > Furniture Operations

Unit

25570 v 2

Demonstrate knowledge of abrasives used in furniture production

Level 2

Credits 4

Assessment Information

Entry Information

There are no pre-requisite requirements for this unit.

Required Evidence

This Assessment Guide, that includes the following completed assessment tasks:

- » Questions

Appeals

The candidate must understand the appeals process before carrying out this assessment.

Information about Competenz's assessment appeals process can be found on the Assessors and Moderators page of Competenz's website www.competenz.org.nz.

Assessment Requirements

This Assessment Guide is designed to help you provide evidence of your skills and knowledge required by this unit standard.

People credited with this unit standard are able to demonstrate knowledge of abrasives used in furniture production.

Before you begin

Read through the assessment requirements yourself. Talk with your Assessor if there is anything you don't understand.

Meet with your Assessor to plan your assessment. Your Assessor will:

- » talk you through this Guide, and discuss when and how you will be assessed.
- » check you are ready to begin this assessment.

What you need to do

1. Complete the following assessment tasks:

Questions	Answer questions about abrasives used in furniture production.
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Note: Your Assessor may choose someone to verify your work. This person must have expertise in abrasives used in furniture production and could be someone you report to, your trainer, or a supervisor or manager who works with you regularly.

2. You may wish to provide additional supporting evidence that proves you have the knowledge and skills required by this unit. Additional evidence may include, for example, workplace documentation you have used and/or completed, training records, photos, screenshots, printouts, videos, voice recordings.
3. When you have completed all assessment tasks, complete the 'Candidate evidence check' at the end of this Guide.
4. When you are sure you have completed and/or attached everything, contact your Assessor or Account Manager to arrange next steps.

Conditions

- » Your evidence must clearly show your knowledge of abrasives used in furniture production.
- » Complete all assessment tasks yourself. Use your own words when answering questions.
- » This unit standard may be assessed against on-job or off-job.
- » It is expected that you will have had learning / experience of abrasives used in furniture production on more than one occasion, before you are formally assessed.
- » It is likely that you will have already been observed using abrasives in furniture production on more than one occasion, before you are formally assessed.
- » All tasks you carry out for this assessment must be completed following workplace procedures, and comply with organisational and legislative (legal) requirements.

References

The assessment tasks must be completed in accordance with the following reference texts:

- » Jackson, A. and Day, D, (2nd ed.) 1999. *Good Wood Handbook*. London, England: Popular Woodworking Books, which is available at <http://www.amazon.com>.

Unit Standard Evidence Map

Unit 25570 v 2		Demonstrate knowledge of abrasives used in furniture production	Level 2	Credits 4
Outcomes and Evidence Requirements			Evidence	No.
Outcome 1: Demonstrate knowledge of abrasives used in furniture production.				
1.1	Types of abrasive grains used to sand timber are explained in accordance with the reference text. Range aluminium oxide, silicon carbide, garnet, glass.	Questions	1	
1.2	Different grades of abrasive paper and the type of job they should be selected for are explained in accordance with the reference text. Range 80, 120, 600+.	Questions	2	
1.3	Different abrasive backings and the type of job they should be selected for are explained in accordance with the reference text. Range paper, cloth, fibre.	Questions	3	
1.4	Types of glue used to bond abrasive to backing are explained in terms of end-use. Range natural glue, synthetic resins.	Questions	4	
1.5	Methods of coating for abrasives are explained in terms of how the abrasives are coated and the effect on spacing of grit. Range gravity, electro.	Questions	5	
1.6	Close grain and open grain abrasives are explained in terms of the types of timber they should be used on, and the reasons they should be used on those types of timber.	Questions	6	
1.7	Different flexes of coated abrasives are explained in terms of the type of jobs they should be selected for. Range single, double, triple.	Questions	7	
1.8	Wet and dry paper are explained in terms of where they are used in the finishing process and types of finishing coats. Range undercoat, gloss, lacquer, paint.	Questions	8	
1.9	The requirements for storage of coated abrasives are explained in terms of temperature and humidity.	Questions	9	

Any queries, contact: Competenz, PO Box 9005, Newmarket, Auckland 1149. Ph. 0800 526 1800

Questions

Answer the following questions about using abrasives in furniture production.

Use your own words. You can answer the questions in writing, or give your answers verbally to your Assessor who will write down what you say. You may need to arrange this in advance with your Assessor.

Draw pictures or diagrams to support your answers if you wish.

Your Assessor may ask you additional questions to check your knowledge and understanding.

Judgement statements

- The candidate's written and/or verbal responses support their competency.
- The candidate answers are correct.

Your name	Candidate name provided
Workplace	Workplace provided
Answers written by: (Tick one)	<input type="checkbox"/> Candidate <input type="checkbox"/> Assessor <input type="checkbox"/> Other (please write):

		<input checked="" type="checkbox"/>
1.	Explain each of the following abrasive grains used to sand timber: <ul style="list-style-type: none">» Aluminium oxide» Silicon Carbide» Garnet» Glass	<input checked="" type="checkbox"/>
Assessor		
This question supports E.R. 1.1.		
Judgement statement		
<input type="checkbox"/> The candidate correctly explains all abrasive grains.		
<input type="checkbox"/> The candidate's answers are in accordance with the reference text.		
Example answer		
» Aluminium oxide		
Good abrasive for general purpose work. Most common sandpaper. Brown or reddish in colour. Man-made material.		
» Silicon Carbide		
Suitable for both wet and dry sanding. Suitable for sanding hardwood. Fast cutting. Black in colour		
» Garnet		
Reddish brown in colour. Excellent abrasive for general wood sanding by hand or power tool. Used for smoothing hardwoods and finishing work. Not long lasting.		
» Glass		

Generally composed of quartz granules on a backing paper. Inexpensive. Relatively soft abrasive. Wears relatively quickly. Best suited to provide a rough finish.

2. Explain three different grades of abrasive paper and the type of job each is commonly used for.

Grade of abrasive paper	Explanation	Type of job
80	Medium coarse	Pre-paint finishing
120	Medium coarse grit	Light material removal
600+	Super fine grit	Final surface sanding

Assessor

This question supports E.R. 1.2.

Judgement statements

- The candidate correctly explains different grades of abrasive paper.
- The candidate's answers are in accordance with the reference text.

Example answer

As above

3. Explain three different abrasive backing types and the type of job each is used for.

Abrasive backing types	Explanation	Type of job
Paper	Paper provides a finer finish than cloth backing and is flexible	Finishing operations and hand sanding
Cloth	Cloth primary use on belts or disk. More durable than paper.	Contour and belt sanding.
Fibre	Fibre backing to withstand heat.	Used for disk or drum sanding and heavy stock removal.

Assessor

This question supports E.R. 1.3.

Judgement statements

- The candidate correctly explains abrasive backing types.
- The candidate's answers are in accordance with the reference text.

Example answer

As above

4. Explain common end uses for each abrasive bonding glue.
- » Natural glue
 - » Synthetic resins.

Assessor

This question supports E.R. 1.4.

Judgement statements

- The candidate correctly explains common end uses for abrasive bonding glues.
- The candidate's answers are in accordance with the reference text.

Example answer

- » Natural glue

Used for manual abrasive use and provide a uniform finish.

- » Synthetic resins

Heat resistant and used for pressure abrasive operations.

5. For each coating below explain:
- How abrasives are coated and
 - The effect on spacing of grit

Type of coating	Explanation of coating	Effect of spacing of grit
Gravity	Dropped onto adhesive	Spacing is not as uniform and grit is flat sloping
Electro	Grit propelled by electro static force	Provides more uniform spacing and grain engagement

Assessor

This question supports E.R. 1.5.

Judgement statements

- The candidate correctly explains methods of coating for abrasives and the effect on spacing of grit.
- The candidate's answers are in accordance with the reference text.

Example answer

As above.

6. Explain the type of timber open and closed grain abrasives should be used on and give a reason why.

Abrasive	Type of timber	Reason for use
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Open grain	Soft timber e.g. pine	Allows for build up of dust and stops clogging in between the grit
Closed grain	Hard timber e.g. rimu	Provides more uniform scratch pattern

Assessor

This question supports E.R. 1.6.

Judgement statements

- The candidate correctly explains the type of timber open and closed grain abrasives should be used on and gives a reason why.
- The candidate's answers are in accordance with the reference text.

Example answer

As above.

7. Explain the main job type that the different flexes of coated abrasives listed below should be used for.

» Single flex should be used for:

Belt sanding

» Double flex should be used for:

Moulding sanding

» Triple flex should be used for:

Contour work.

Assessor

This question supports E.R. 1.7.

Judgement statements

- The candidate correctly explains the main job type that different flexes of coated abrasives listed should be used for.
- The candidate's answers are in accordance with the reference text.

Example answer

As above.

8. Explain where wet and dry paper are used in the finishing process for the following finishing coats.

» Undercoat

Sanding the undercoat after it has been applied.

» Gloss

Buffering after each application of gloss.

» Lacquer

At the end of the lacquering process

» Paint

At the end of the painting process to fix any defects.

Assessor

This question supports E.R. 1.8.

Judgement statements

- The candidate correctly explains where wet and dry paper are used in the finishing process for each finishing coat.
- The candidate's answers are in accordance with the reference text.

Example answer

As above.

9. Explain the ideal temperature and humidity range for the storage of coated abrasives.

Temperature:

Humidity:

Assessor

This question supports E.R. 1.8.

Judgement statements

- The candidate correctly explains the ideal temperature and humidity range for the storage of coated abrasives.
- The candidate's answers are in accordance with the reference text.

Example answer

Temperature: 18-26°C

Humidity: 40-50%

You have reached the end of the questions.

Assessor final judgement

After reviewing the candidate's evidence for Unit Standard 25570 v2, it is clear that the candidate can competently:

- Demonstrate knowledge of abrasives used in furniture production.

Assessor feedback to the candidate

Please provide specific feedback to the candidate about their performance in meeting the requirements of this unit standard.

Assessor

Assessor name recorded

Date

Date recorded