

# **COMPETENCY STANDARD**

**FOR** 

**Wood Coating** 

Level: 2

(Furniture Sector)

Code: CS-FUR-WC-L2-EN-V1



National Skills Development Authority
Prime Minister's Office
Government of the People's Republic of Bangladesh

# **Copyright**

National Skills Development Authority

Prime Minister's Office

Level: 10-11, Biniyog Bhaban,

E-6 / B, Agargaon, Sher-E-Bangla Nagar Dhaka-1207, Bangladesh.

Email: ec@nsda.gov.bd Website: www.nsda.gov.bd.

National Skills Portal: http:\\skillsportal.gov.bd

National Skills Development Authority (NSDA) is the owner of this document. Other interested parties must obtain written permission from NSDA for reproduction of information in any manner, in whole or in part, of this Competency Standard, in English or other language.

This Competency Standard for Wood coating is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

This document has been validated by NSDA in association with Furniture Sector, industry representatives, academia, related specialist, trainer, and related employee.

Public and private institutions may use the information contained in this standard for activities benefitting Bangladesh.

### Introduction

The NSDA aims to enhance an individual's employability by certifying completeness with skills. NSDA works to expand the skilling capacity of identified public and private training providers qualitatively and quantitatively. It also aims to establish and operationalize a responsive skills ecosystem and delivery mechanism through a combination of well-defined set of mechanisms and necessary technical supports.

Key priority economic growth sectors identified by the government have been targeted by NSDA to improve current job skills along with existing workforce to ensure required skills to industry standards. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training program. Wood Coating is selected as one of the priority occupations of Furniture Sector. This standard is developed to adopt a demand driven approach to training with effective inputs from Industry Skills Council (ISC), employer associations and employers.

Generally, a competency standard informs curriculum, learning materials, assessment and certification of trainees enrolled in Skills Training. Trainees who successfully pass the assessment will receive a qualification in the National Skills Qualification Framework (NSQF) under Bangladesh National Qualification Framework (BNQF) and will be listed on the NSDA's online portal.

This competency standard is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements. A series of stakeholder consultations, workshops were held to develop this document.

The document also details the format, sequencing, wording and layout of the Competency Standard for an occupation which is comprised of Units of Competence and its corresponding Elements.

### **Overview**

A competency standard is a written specification of the knowledge, skills and attitudes required for the performance of an occupation, trade or job corresponding to the industry standard of performance required in the workplace.

The purpose of a competency standards is to:

- provide a consistent and reliable set of components for training, recognising, and assessing people's skills, and may also have optional support materials
- enable industry recognised qualifications to be awarded through direct assessment of workplace competencies
- encourage the development and delivery of flexible training which suits individual and industry requirements
- encourage learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

Competency standards are developed by a working group comprised of representative from NSDA, Key Institutions, ISC, and industry experts to identify the competencies required of an occupation in Furniture Sector.

Competency standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. CS acknowledge that people can achieve technical and vocational competency in many ways by emphasizing what the learner can do, not how or where they learned to do it.

With competency standards, training and assessment may be conducted at the workplace or at training institute or any combination of these.

Competency standards consist of a number of units of competency. A unit of competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of competency are documented in a standard format that comprises of:

- unit title
- nominal duration
- unit code
- unit descriptor
- elements and performance criteria
- variables and range statement
- curricular content guide
- assessment evidence guides

Together, all the parts of a unit of competency:

- describe a work activity
- guide the assessor to determine whether the candidate is competent or not yet competent

The ensuing sections of this document comprise of a description of the relevant occupation, trade or job with all the key components of a unit of competency, including:

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements
- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide.

# Competency Standards for National Skill Certificate, Level-2 in Wood Coating of Furniture Sector

# Level Descriptors of NSQF (BNQF 1-6)

Level & Job classification	Knowledge Domain	Skills Domain	Responsibility Domain
6-Mid-Level Manager/ Sub Assistant Engineer	Comprehensive actual and theoretical knowledge within a specific work or study area with an awareness of the validity and limits of that knowledge, able to analyse, compare, relate and evaluate.	Specialised and wider range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems. Communicate professional issues and solutions to the team and to external partners/users.	Work under broad guidance and self-motivation to execute strategic and operational plan/s. Lead lower-level management. Diagnose and resolve problems within and among work groups.
5-Supervisor	Broad knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to scrutinize and break information into parts by identifying motives or causes.	Broad range of cognitive and practical skills required to generate solutions to specific problems in one or more work or study areas. Communicate practice-related problems and possible solutions to external partners.	Work under guidance of management and self-direction to resolve specific issues. Lead and take responsibility for the work and actions of group/team members. Bridge between management.
4-Highly Skilled Worker	Broader knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to solve problems to new situations by comparing and applying acquired knowledge.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and information. Communicate using technical terminology and IT technology with partners and users as per workplace requirements.	Work under minimal supervision in specific contexts in response to workplace requirements. Resolve technical issues in response to workplace requirements and lead/guide a team/ group.
3-Skilled worker	Moderately broad knowledge in a specific work or study area, able to perceive ideas and abstract from drawing and design according to workplace requirements.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools. Communicate with his team and limited external partners upholding the values, nature and culture of the workplace	Work or study under supervision with considerable autonomy. Participate in teams and responsible for group coordination.
2-Semi Skilled Worker	Basic understanding of underpinning knowledge in a specific work or study area, able to interpret and apply common occupational terms and instructions.	Skills required to carry out simple tasks, communicate with his team in the workplace presenting and discussing results of his work with required clarity.	Work or study under supervision in a structured context with limited scope of manipulation
1 –Basic Skilled Worker	Elementary understanding of ability to interpret the underpinning knowledge in a specific study area, able to interpret common occupational terms and instructions.	Specific Basic skills required to carry out simple tasks. Interpret occupational terms and present the results of own work within guided work environment/under supervision.	Work under direct supervision in a structured context with limited range of responsibilities.

# **List of Abbreviations**

CS	Competency Standard
ISC	Industry Skills Council
NSDA	National Skills Development Authority
NSQF	National Skills Qualifications Framework
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment
SCVC	Standards and Curriculum Validation Committee
STP	Skills Training Provider
SOP	Standard Operating Procedure
UoC	Unit of Competency
ISO	International Organization for Standardization
MSDS	Material Safety Data Sheet
OSH	Occupational Safety and Health
CAD	Course Accreditation Document
BNQF	Bangladesh National Qualification Framwork
CBLM	Competency Based Learning Materials
СВС	Competency Based Curriculum

# Approved by 28<sup>th</sup> Authority Meeting of NSDA Held on 07 September 2023

# **Table of Contents**

Copyright	i
Introduction	ii
Overview	iii
Level Descriptors of NSQF (BNQF 1-6)	iv
List of Abbreviations	v
Course Structure	7
Units & Elements at Glance	8
GU-01-L1-V1: Apply Occupational Health & Safety (OSH) practices at workplace	11
GU-02-L1-V1: Perform Computations Using Basic Mathematical Concepts	14
The sector specific competencies	17
SU-FUR-01-L1-V1: Use Measuring Tools and Equipment	18
SU-FUR-03-L2-V1: Prepare Wood for Work	20
The Occupational Specific Competencies	24
OU-FUR-WC-01-L2-V1: Use Tools and Equipment	25
OU-FUR-WC-02-L2-V1: Interpret Varnish & Wood keeper materials	27
OU-FUR-WC-03-L2-V1: Prepare Surface for Varnish & Wood Keeper	30
OU-FUR-WC-04-L2-V1: Perform primer for Varnish and Wood keeper	33
OU-FUR-WC-05-L2-V1: Perform Varnish / Polish on wooden surface	35
OU-FUR-WC-06-L2-V1: Perform Wood keeper on the wooden surface	37
Workshop Minutes	42

# Competency Standards for National Skill Certificate, Level- 2, in Wood Coating of Furniture Sector

# **Course Structure**

SL No	Unit code and Title  UOC Level				
Gene	eric Units of Competencies			•	
1.	GU-01-L1-V1	Apply Occupational Health & Safety (OSH) practices at workplace	1	15	
2.	GU-02-L1-V1	Perform computations using basic mathematical concepts	1	15	
Sub 7	Гotal			30	
Secto	or Specific Units of Compet	encies			
3.	SU-FUR-01-L1-V1	Use Measuring Tools and Equipment	1	20	
4.	SU-FUR-02-L1-V1	Prepare wood for work	1	30	
Sub	Total			50	
Occu	pation Specific Units of Co	ompetencies			
5.	OU-FUR-WC-01-L2-V1	Use Hand Tools and Power Tools	2	20	
6.	OU-FUR-WC-02-L2-V1	Interpret Varnish & Wood keeper materials	2	40	
7.	OU-FUR-WC-03-L2-V1	Prepare surface for Varnish & Wood Keeper	2	60	
8.	OU-FUR-WC-04-L2-V1	Perform primer for Varnish and Wood keeper	2	40	
9.	OU-FUR-WC-05-L2-V1	Perform Varnish / Polish on wooden surface	2	60	
10.	OU-FUR-WC-06-L2-V1	Perform Wood keeper on the wooden surface	2	60	
Sub	Total			280	
Tota	al Duration			360	

# **Units & Elements at Glance**

# **Generic Competencies (30 Hours)**

Code	Unit of Competency	Elements of competency	Duration (Hours)
GU-01-L1-V1	Apply Occupational Health & Safety (OSH) practices at workplace	<ol> <li>Identify OSH policies and procedures.</li> <li>Follow OSH procedure.</li> <li>Report hazards and risks</li> <li>Respond to emergencies.</li> <li>Maintain personal wellbeing.</li> </ol>	15
GU-02-L1-V1	Perform computations using basic mathematical concept	<ol> <li>Identify calculation requirements in the workplace.</li> <li>Select appropriate mathematical methods for the calculation.</li> <li>Use tool/instrument to perform calculations.</li> </ol>	15
			30

# **Sector Specific Units of Competencies (40 Hours)**

Code	Unit of Competency	Elements of competency	Duration (Hours)
SU-FUR-01-L1-V1	Use Measuring Tools and Equipment	Select measuring instruments     Carry out measurements and calculation     Maintain measuring instruments	20
SU-FUR-02-L1-V1	Prepare wood for work	<ol> <li>Select wood and wood substitutes</li> <li>Prepare work piece</li> <li>Store wood/ and wood substitutes</li> </ol>	20

# **Occupation Specific Units of Competencies (240 Hours)**

Code	Unit of competency	Elements of competency	Durati on (hours)
OU-FUR-WC- 01-L1-V1	Use Hand Tools and Power Tools	<ol> <li>Identify tools.</li> <li>Using hand tools</li> <li>Using power tools</li> <li>Perform basic preventive maintenance.</li> <li>Maintain workplace and store tools equipment</li> </ol>	20

L2-V1	keeper materials	2. Perform basic measurement and calculation	
		3. Identify specific colour	
		4. Clean and store tools and	
		equipment	
OU-FUR-WC-03-	Prepare surface for Varnish &	1. Prepare for work	60
L2-V1	Wood Keeper	2. Prepare surface for varnish &	
		Wood keeper	
		<ul><li>3. Apply and remove masking.</li><li>4. Clean and store tools and</li></ul>	
		4. Clean and store tools and equipment	
OU-FUR-WC-04-	Perform primer for Varnish	Prepare primer materials.	40
L2-V1	and Wood keeper	2. Perform primer	
		3. Clean and store tools and	
		equipment	
OU-FUR-WC-05- L2-V1	Perform Varnish / Polish on wooden surface	Prepare varnish material	60
		2. Perform varnish material	
		3. Clean and maintain equipment and	
		work area	
OU-FUR-WC-06-	Perform Wood keeper (Wood	Prepare colour for wood keeper.	60
L2-V1	Coating) on wooden surface	2. Apply Colour for wood keeper	
		3. Prepare wood keeper	
		4. Perform wood keeper	
		5. Clean and maintain equipment and	
	Sub Tot	work area	240
	Sub 10t	ai	<b>24</b> 0
	Total		360



<b>Unit Code and Title</b>	GU-01-L2-V1: Apply Occupational Health & Safety (OSH) practices at workplace		
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) procedure in the workplace. It specifically includes the task of identifying OSH policies and procedures, following OSH procedure, reporting hazards and risks, responding to emergencies and maintaining personal well-being.		
<b>Nominal Hours</b>	15 Hours		
Elements of Competency	Performance Criteria Bold & Underlined terms are elaborated in the Range of Variables		
Identify OSH policies and procedures	<ul> <li>1.1. OSH policies and safe operating procedures are accessed and stated</li> <li>1.2. Safety signs and symbols are identified and followed</li> <li>1.3. Emergency response, evacuation procedures and other</li> </ul>		
	contingency measures are determined according to workplace requirements		
Follow OSH procedure  3. Report hazards and risks  4. Respond to emergencies	<ul> <li>2.1 Personal protective equipment (PPE) is selected and collected as required</li> <li>2.2 Personal protective equipment (PPE) is correctly used in accordance with organization OSH procedures and practices</li> <li>2.3 A clear and tidy workplace is maintained as per workplace standard</li> <li>2.4 PPE is maintained to keep them operational and compliant with OSH regulations</li> <li>3.1 Hazards and risks are identified, assessed and controlled</li> <li>3.2 Incidents arising from hazards and risks are reported to designated authority</li> <li>4.1 Alarms and warning devices are responded</li> <li>4.2 Workplace emergency procedures are followed</li> <li>4.3 Contingency measures during workplace accidents, fire and other emergencies are recognized and followed in accordance</li> </ul>		
5. Maintain personal well-being	other emergencies are recognized and followed in accordance with organization procedures  4.4 First aid procedures are applied during emergency situations  5.1 OSH policies and procedures are adhered to OSH awareness programs are participated in as per workplace guidelines and procedures.  5.2 Corrective actions are implemented to correct unsafe condition in the workplace  5.3 "Fit to work" records are updated and maintained according to workplace requirements		
Range of Variables			

Variables	Range (may include but not limited to):	
1. OSH policies	1.1.	Bangladesh standards for OSH
	1.2.	Fire Safety Rules and Regulations
	1.3.	Code of Practice
	1.4.	Industry Guidelines
2. Safe operating	2.1	Orientation on emergency exits, fire extinguishers, fire escape,
procedures		etc.
	2.2	Emergency procedures
	2.3	First Aid procedures
	2.4	Tagging procedures
	2.5	Use of PPE
	2.6	Safety procedures for hazardous substances
3. Safety signs and	3.1	Direction signs (exit, emergency exit, etc.)
symbols	3.2	First aid signs
	3.3	Danger Tags
	3.4	Hazard signs
	3.5	Safety tags
	3.6	Warning signs
4. Personal Protective	4.1	Gas Mask
Equipment (PPE)	4.2	Gloves
	4.3	Safety boots
	4.4	Face mask
	4.5	Overalls
	4.6	Goggles and safety glasses
	4.7	Sun block
	4.8	Chemical/Gas detectors
5. Hazards	5.1	Chemical hazards
	5.2	Biological hazards
	5.3	Physical Hazards
	5.4	Mechanical and Electrical Hazard
	5.5	Mental hazard
	5.6	Ergonomic hazard
6. Emergency procedures	6.1	Fire fighting
	6.2	Earthquake
	6.3	Medical and first aid
	6.4	Evacuation
7. Contingency measures	7.1	Evacuation
	7.2	Isolation
o (Title W. 19	7.1	Decontamination
8. "Fit to Work" records	8.1	Medical Certificate every year
	8.2	Accident reports, if any
	8.3	Eye vision certificate

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency

requirements of current version of the Unit of Competency			
	Asse	essment required evidence that the candidate:	
Critical aspects of	1.1	stated OSH policies and safe operating procedures	
	1.2	followed safety signs and symbols	
	1.3	used personal protective equipment (PPE)	
	1.4	maintained workplace clear and tidy	
competency	1.5	assessed and Controlled hazards	
	1.6	followed emergency procedures	
	1.7	followed contingency measures	
	1.8	implemented corrective actions	
	2.1	Define OSH	
	2.2	OSH Workplace Policies and Procedures	
	2.3	Work safety procedures	
2 Underning	2.4	Emergency procedures	
2. Underpinning knowledge	2.5	Hazard control procedure	
Kilowieuge	2.6	Different types of hazards	
	2.7	PPE and there uses	
	2.8	Personal hygiene practices	
	2.9	OSH awareness	
	3.1	Accessing OSH policies	
	3.2	Using of PPE	
3. Underpinning skills	3.3	Handling cleaning tools and equipment	
	3.4	Writing report	
	3.5	Responding to emergency procedures	
	4.1	Commitment to occupational health and safety	
	4.2	Sincere and honest to duties	
	4.3	Promptness in carrying out activities	
4. Required attitude	4.4	Environmental concerns	
4. Required attitude	4.5	Eagerness to learn	
	4.6	Tidiness and timeliness	
	4.7	Respect of peers and seniors in workplace	
	4.8	Communicate with peers and seniors in workplace	
	5.1	Workplace	
5. Resource implications	5.2	Equipment and outfits appropriate in applying safety measures	
3. Resource implications	5.3	Tools, equipment, materials and documentation required	
	5.4	OSH Policies and Procedures	
	Con	npetency should be assessed by:	
6. Methods of	6.1	Written test	
assessment	6.2	Demonstration	
	6.3	Oral questioning	
<u>,                                      </u>	•		

7. Context of assessment	7.1	Competency assessment must be done in NSDA accredited
		assessment centre
	7.2	Assessment should be done by a NSDA certified/nominated
		assessor

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code and Title	<b>GU-02-L1-V1: Perform Computations Using Basic</b>		
Unit Code and Title	Mathematical Concepts		
Nominal Hours	15 Hours		
Unit Descriptor	This unit of competency requires the knowledge, skills and attitude to perform computations using basic mathematical concepts in the workplace.  It specifically includes the tasks of identifying calculation requirements in the workplace, selecting appropriate mathematical method/concept for the calculation and using appropriate instruments tools to perform calculation.		
Elements of Competency	Performance Criteria  Bold & Underlined terms are elaborated in the Range of Variables Training Components		
1. Identify calculation requirements in the workplace	<ul> <li>1.1 Job requirements are identified</li> <li>1.2 <u>Measurements</u> are selected in accordance with job requirement</li> <li>1.3 Calculation requirements are identified from <u>workplace</u> <u>information</u></li> </ul>		
2. Select appropriate mathematical methods for the calculation.	<ul> <li>2.1 Mathematical methods are identified</li> <li>2.2 Appropriate method is selected to carry out the calculation re quirements</li> <li>2.3 Tolerance and clearance limits are identified and adjusted according to the job requirements</li> </ul>		
3. Use tool/instrument to perform calculations	<ul> <li>3.1 Work instructions are confirmed and applied to the job in hand</li> <li>3.2 Materials to be measured are identified as per job specification</li> <li>3.3 Appropriate tool/instrument is selected based on materials to be measured</li> </ul>		
Range of Variables			
Variable	Range (may include but not limited to)		
1. Measurements	<ul><li>1.1 Length</li><li>1.2 Width</li></ul>		

	1.3	Weight
	1.4	Tolerance
	2.1	Job Order
	2.2	Design
2. workplace information	2.3	Working drawing
	2.4	Verbal instructions
	2.5	Written Instruction
	3.1	Addition
	3.2	Subtraction
2 Appropriate method	3.3	Division
3. Appropriate method	3.4	Multiplication
	3.5	Conversion
	3.6	Percentage and ratio calculation
	4.1	Calculator
4. Tool/ Instrument	4.2	Scale
	4.3	Measuring tape
	4.4	Marker
Evidence Guide	<u> </u>	

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the

requirements of the current version of the Unit of Competency.

requirements of the current version of the Unit of Competency.				
	Assessment required evidence that the candidate:			
	1.1	identified calculation requirements from workplace		
		information		
	1.2	selected appropriate method to carry out the calculation		
		requirements		
1. Critical Aspects of	1.3	selected measurements		
Competency	1.4	selected appropriate methods		
T	1.5	used tool/instrument		
	1.6	added numbers		
	1.7	subtracted numbers		
	1.8	multiplied numbers.		
	1.9	divided numbers.		
	1.10	completed calculations using appropriate tools/instruments		
		Numerical concept		
2. Underpinning	2.2.	Basic mathematical methods such as addition, subtraction, m		
Knowledge		ultiplication and division and percentage.		
Milowiedge		Mathematical language, symbols, and terminology.		
		Measuring units		
	3.1	Interpret numerical concept		
3. Underpinning Skills	3.2	Interpret mathematical methods such as addition, subtraction,		
		multiplication and division and percentage.		
	3.3	Interpret mathematical language, symbols and terminology.		
	3.4	Interpret measuring units		

	4.1.	Commitment to occupational health and safety
	4.2.	Environmental concerns
4. Underpinning	4.3.	Eagerness to learn
Attitudes	4.4.	Tidiness and timeliness
	4.5.	Respect for rights of peers and seniors in workplace
	4.6.	Communication with peers and seniors in workplace
	5.1.	Work place Procedure
5. Resource Implications	5.2.	Materials relevant to the proposed activity
3. Resource implications	5.3.	All tools, equipment, material and documentation required.
	5.4.	Relevant specifications or work instructions
	6.1.	Written Test
6. Methods of	6.2.	Demonstration
Assessment	6.3.	Oral Questioning
	6.4.	Portfolio
	7.1.	Competency assessment must be done in a NSDA accredited
7. Context of Assessment		assessment center
	7.2.	Assessment should be done by an NSDA certified/ nominated
		assessor

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NSQF/BNQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

The sector specific competencie	es

<b>Unit Code and Title</b>	SU-FUR-01-L1-V1: Use Measuring Tools and Equipment		
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use measuring instruments. It specifically includes the tasks of selecting measuring instruments, carrying out measurements and calculation and maintaining measuring instruments.		
Nominal Hours	20 Hours		
Elements of Competency	Performance Criteria  Bold & Underlined terms are elaborated in the Range of Variables		
1. Select measuring instruments	<ul> <li>1.1 Object or component to be measured is identified.</li> <li>1.2 Correct specifications are obtained from relevant source</li> <li>1.3 Required measuring instruments is selected in accordance with job requirements.</li> <li>1.4 Measuring instruments are calibrated as per standard if necessary;</li> </ul>		
2. Carry out measurements and calculation	<ul> <li>2.1 Accurate measurements are obtained in accordance with job requirement.</li> <li>2.2 <u>Basic calculation</u> needed to complete work tasks are performed.</li> <li>2.3 Calculations involving fractions, percentages and mixed numbers are used to complete workplace tasks.</li> <li>2.4 Numerical calculation is checked and corrected for accuracy in accordance with job requirement.</li> <li>2.5 Instruments are read according to the limit of accuracy;</li> </ul>		
3. Maintain measuring instruments	<ul><li>3.1 Measuring instruments are checked for damage prior to storage.</li><li>3.2 Measuring instruments are cleaned before and after using.</li></ul>		
Range of Variables			
Variable	Range (may include but not limited to):		
1. Measuring instruments	1.1 Measuring tape 1.2 Callipers (inside-outside) 1.3 Vernier Callipers 1.4 Thickness gauge 1.5 Torque gauge 1.6 Try square 1.7 Bevel Square 1.8 Rafter Square 1.9 Protractor 1.10 Spirit Level		

	1.11	Steel rule
	1.12	Moisture Meter
	1.13	Thermometer
	1.14	T square
	2.1	Volume
	2.2	Area
	2.3	Displacement
	2.4	Circumference
2 Designation	2.5	Diameter
2. Basic calculation	2.6	Radius
	2.7	Length
	2.8	Thickness
	2.9	Outside diameter
	2.10	Taper
E . 1 C . 1		

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.

requirements of current version of the Unit of Competency.		
	Assessment required evidences that the candidate:	
1. Critical aspects of	1.1 selected measuring instruments	
competency	1.2 carried-out measurements and calculations	
	1.3 maintained measuring instruments.	
	2.1 Types of measuring tools and equipment.	
2. Underpinning	2.2 Measuring instruments and its use.	
knowledge	2.3 Formula for volume, area, perimeter and other geometric	
	figures.	
	3.1 Caring and handling measuring instruments.	
	3.2 Calibrating and using measuring instruments.	
	3.3 Performing calculation by addition, subtraction,	
3. Underpinning skills	multiplication and division.	
	3.4 Visualizing objects and shapes.	
	3.5 Interpreting formula for volume, area, perimeter and other	
	geometric figures.	
	4.1 Commitment to occupational safety and health.	
	4.2 Promptness in carrying out activities.	
	4.3 Sincere and honest to duties.	
4. Required attitudes	4.4 Eagerness to learn.	
1. Required attitudes	4.5 Tidiness and timeliness.	
	4.6 Environmental concerns.	
	4.7 Respect for rights of peers and seniors at workplace.	
	4.8 Communication with peers and seniors at workplace.	

5. Resource implication	The following resources must be provided:
	5.1 workplace (actual or simulated)
	5.2 tools, equipment and physical facilities appropriate to
	perform activities
	5.3 materials and consumables needed to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to:
	6.1 written test
	6.2 demonstration
	6.3 oral questioning
	6.4 portfolio.
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited
	assessment centre
	7.2 Assessment should be done by a NSDA certified/nominated
	assessor

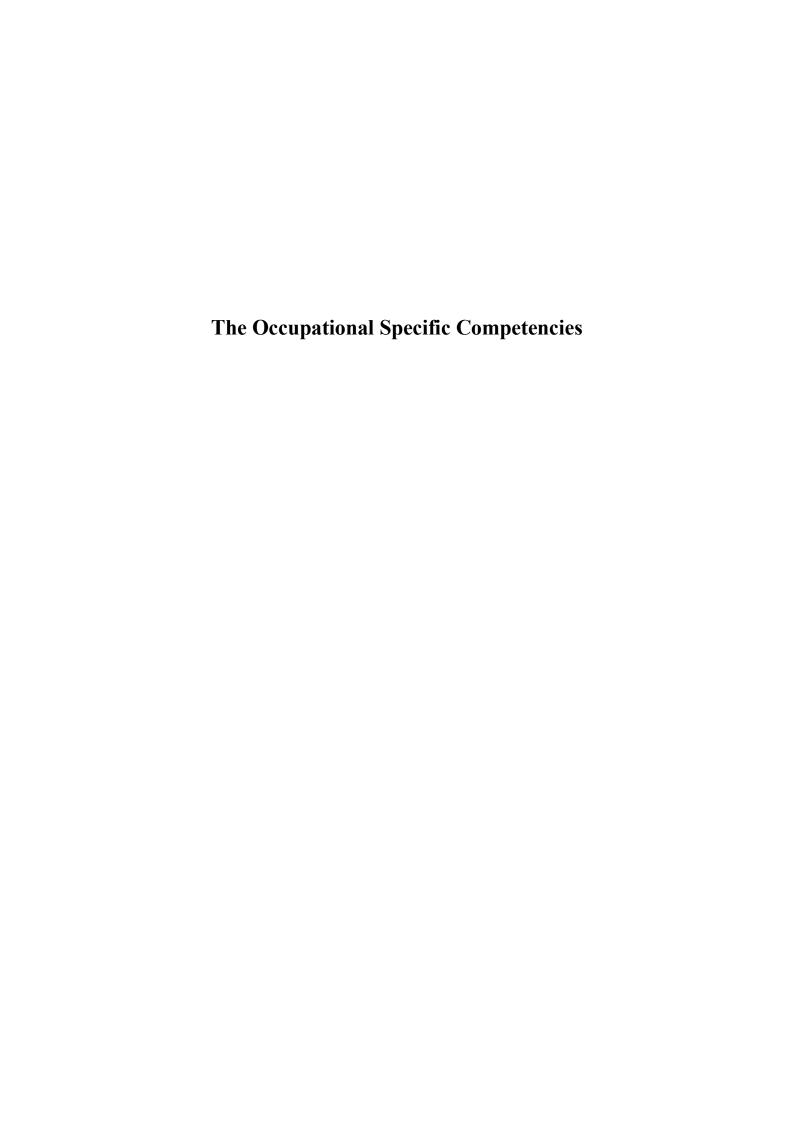
Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF/BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA

<b>Unit Code and Title</b>	SU-FUR-03-L2-V1: Prepare Wood for Work
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare wood for work. It specifically includes the tasks of selecting wood and wood substitutes, preparing work piece and preserving wood.
<b>Nominal Hours</b>	30 Hours
Elements of Competency	Performance Criteria  Bold & Underlined terms are elaborated in the Range of Variables
Select wood and wood substitutes	<ul> <li>1.1 Occupational Safety and Health (OSH) procedures are maintained throughout the works.</li> <li>1.2 Wood and wood substitutes are selected according to the requirement of works.</li> <li>1.3 Quality of wood/wood substitutes are checked as per work specification.</li> </ul>
2. Prepare work piece	2.1 Dimension of work piece is checked according to works specification.

	2.2 Damaged and unnecessary portion of wood/wood substitutes is
	trimmed as per workplace procedures using <b>hand tools</b> and
	power tools.
	2.3 Prepared wood/wood substitutes are stored as per workplace
	procedures.
3. Store wood and	3.1 Wood/wood substitutes are prepared for storing;
wooden board	3.2 Wood/wood substitutes is stored according to workplace
wooden board	procedure.
Range of Variables	
Variable	Range (may include but not limited to):
	1.1 Teak
	1.2 Garjon
	1.3 Mahogany
	1.4 Mango
	1.5 Gamari
1. Wood	1.6 Korai
	1.7 Oak
	1.8 Beech
	1.9 Teak Chambul
	1.10 Chapalish
	1.11 Pine wood
	2.1 Particle board/ Wood-tex board
	2.2 Plain MDF board
	2.3 HDF board
	2.4 Veneer board
	2.5 Plywood
	2.6 Formica
2. Wood substitutes	2.7 Laminating board
	2.8 Glass Sheet
	2.9 PVC Board
	2.10 WPVC Board
	2.11 HPL Board
	2.12 Acrylic Board
	3.1 Measuring tape
	3.2 Ruler
	3.3 Try square.
	3.4 Rafter Square
3. Hand tools	3.5 Hand saw
	3.6 Pencil
	3.7 Moisture me <i>ter</i>
	3.8 Vice
	3.9 C-Clamp

4. Power tools	4.1 Hand circular saw
	authentic, valid, sufficient, reliable, consistent, recent and meet all at version of the Unit of Competency.
Critical aspects of competency	Assessment required evidences that the candidate:  1.1 maintained safety throughout the work  1.2 identified wood and wood substitute  1.3 prepared and preserved wood and wood substitute
2. Underpinning knowledge	<ul> <li>2.1 Types of wood and wood substitutes.</li> <li>2.2 Use of wood and wood substitutes</li> <li>2.3 Quality criteria of wood and wood substitute</li> <li>2.4 Wood and wood substitute preservation process.</li> <li>2.5 Work and wood substitute place procedure.</li> </ul>
3. Underpinning skills	<ul> <li>3.1 Using safety requirement.</li> <li>3.2 Identifying wood and wood substitute for specified work.</li> <li>3.3 Use of hand and power tools.</li> <li>3.4 Applying techniques of preserving wood and wood substitute.</li> <li>3.5 Interpreting work specifications.</li> </ul>
4. Required attitudes	<ul> <li>4.1 Commitment to occupational safety and health.</li> <li>4.2 Promptness in carrying out activities.</li> <li>4.3 Sincere and honest to duties.</li> <li>4.4 Environmental concerns.</li> <li>4.5 Eagerness to learn.</li> <li>4.6 Tidiness and timeliness.</li> <li>4.7 Respect for rights of peers and seniors at workplace.</li> <li>4.8 Communication with peers and seniors at workplace.</li> </ul>
5. Resource implication	<ul> <li>The following resources must be provided:</li> <li>5.1 workplace (actual or simulated)</li> <li>5.2 tools, equipment and physical facilities appropriate to perform activities</li> <li>5.3 materials and consumables needed to perform activities.</li> </ul>
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Context of assessment	<ul> <li>7.1 Competency assessment must be done in NSDA accredited assessment centre</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF/BNQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA



<b>Unit Code and Title</b>	OU-FUR-WC-01-L2-V1: Use Tools and Equipment
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use hand tools and portable power tools.  It specifically includes the tasks of preparing for works, tools and equipment, applying tools and equipment and maintaining tools and power tools.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria  Bold & Underlined terms are elaborated in the Range of Variables
1. Prepare for works	<ul> <li>1.1 Occupational Safety and Health (OSH) requirements, are observed</li> <li>1.2 PPE are collected and worn as per requirement</li> <li>1.3 Tasks are identified.</li> <li>1.4 All safety procedures in using tools are observed.</li> </ul>
2. Prepare tools and equipment	<ul> <li>2.1 <u>Tools and Equipment</u> are identified and selected in accordance with the task requirements</li> <li>2.2 Tools and equipment are checked for proper operation and safety</li> <li>2.3 Unsafe or faulty tools are identified and marked for repair</li> </ul>
3. Use tools and equipment	<ul><li>3.1 User's manuals of tools and equipment are read and interpreted</li><li>3.2 Tools and equipment are used according to tasks</li><li>3.3 Malfunctions, unplanned or unusual events are reported to the supervisor.</li></ul>
4. Maintain tools and equipment	<ul> <li>4.1 Tools and equipment are checked for damage prior to storage.</li> <li>4.2 Tools and equipment's are cleaned before and after using.</li> <li>4.3 Power tools are maintained using relevant lubrications as per manufacturer's instructions.</li> <li>4.4 Hand tools and power tools are stored in the designated area.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Tools and Equipment	<ul> <li>1.1 Anti-cutter</li> <li>1.2 Brush</li> <li>1.3 Roller</li> <li>1.4 Blower</li> <li>1.5 Sanding machine</li> <li>1.6 Grinder</li> <li>1.7 Wood planner</li> <li>1.8 Moisture meter</li> <li>1.9 IR Thermometer</li> </ul>

	1.10 Humidity meter
	1.11 Dew point meter
	1.12 WFT meter
	1.13 Scrapper
	1.14 Spray gun
	2.1 Helmet/ Scarf
	2.2 Hand gloves
	2.3 Dust mask
2. PPE	2.4 Apron
	2.5 Safety shoe
	2.6 Ear plug
	2.7 Safety goggles

The evidence must be authentic, valid, sufficient, reliable, consistent, recent, and meet all requirements of current version of the Unit of Competency.

1	•
	Assessment required evidences that the candidate:
Critical aspects of competency	1.1 demonstrated safe working practices
	1.2 used hand tools and portable power tools
	1.3 maintained and stored hand tools and power tools.
	2.1 Safety requirements in handling tools.
2. Underpinning	2.2 Function, operation, common faults of tools
knowledge	2.3 Maintenance of tools.
Knowledge	2.4 Storage of tools.
	2.5 User's manuals
3. Underpinning	3.1 Safe handling of tools
skills	3.2 Using and maintaining hand tools and portable power tools.
	4.1 Commitment to occupational safety and health.
	4.2 Promptness in carrying out activities.
	4.3 Sincere and honest to duties.
4. Required attitudes	4.4 Eagerness to learn.
4. Required attitudes	4.5 Tidiness and timeliness.
	4.6 Environmental concerns.
	4.7 Respect for rights of peers and seniors at workplace.
	4.8 Communication with peers and seniors at workplace.
5. Resource implication	The following resources must be provided:
	5.1 workplace (actual or simulated)
	5.2 tools, equipment and physical facilities appropriate to perform
	activities
	5.3 materials, consumables to perform activities.

6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in NSDA accredited assessment center</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA

OU-FUR-WC-02-L2-V1: Interpret Varnish & Wood keeper
materials
This unit covers the knowledge, skills and attitudes required to Interpret wood coating materials.  It specifically includes the tasks of identifying basic varnish material, preforming basic measurement and calculation, identifying specific colour, cleaning and storing tools and equipment
40 Hours
Performance Criteria  Bold & Underlined terms are elaborated in the Range of Variables  1.1 Occupational Safety and Health (OSH) requirements, are observed throughout the work.  1.2 Varnish materials are identified as per job requirements.  1.3 Properties of basic coating materials are explained  1.4 Application procedure of basic coating materials are interpreted
<ul> <li>1.5 Materials specifications are read and interpreted</li> <li>1.6 Materials quality are checked as per specification</li> <li>2.1 Tools, equipment and materials are collected as per</li> </ul>
requirement  2.2 Measuring unit to be used are determined as per workplace requirement  2.3 Appropriate measuring instruments are selected as per requirement

	2.4 Calculation is performed using Standard procedure
3. Identify specific colour	<ul> <li>3.1 Colours of wood coating are interpreted</li> <li>3.2 Colours are identified as per job requirement</li> <li>3.3 Colours are collected as per job requirement</li> <li>3.4 Mixing ratio of colours are maintained</li> <li>3.5 Unexpected situations are responded with rules and regulation</li> </ul>
4. Clean and store tools and equipment	<ul> <li>4.1 Unused materials are stored or recycled as required.</li> <li>4.2 Tools and equipment are cleaned and stored as per workplace standard</li> <li>4.3 Faulty and defective tools are tagged and reported in accordance with workplace practices.</li> <li>4.4 Waste materials are disposed as per SOP.</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Varnish material	1.1 Putty (water based, XY clear putty, Wax etc.) 1.2 Wood Filler 1.3 Thinner (NC thinner, PU thinner, Spirit etc.) 1.4 Wood Keeper 1.5 Dye Stain (Walnut, Teak, Mahogany etc.) 1.6 Dye powder (Color) 1.7 Gala 1.8 Karfa 1.9 Chalk powder 1.10 Fresh powder 1.11 Teak powder 1.12 Zinc Oxide Powder 1.13 Ella Soil powder 1.14 Red oxide powder 1.15 Brown powder 1.16 Wood Bleach 1.17 Shidur powder 1.18 Vhusha-kali powder 1.19 Mahogany powder 1.20 Cotton 1.21 Masking tape 1.22 Cloth (Polish cloth, marking cloth, Jute, filter cloth) 1.23 Sanding paper (OP, 1P, 80P, 120P, 240P,320P etc.)

2. Measuring instruments	2.1 Measuring cup 2.2 Measuring tape 2.3 Weighing Scale
3. Colour	3.1 Teak 3.2 Mahogany 3.3 Walnut 3.4 Rosewood 3.5 Black 3.6 Yellow 3.7 Natural Wood Colour etc.
4. Unexpected situations	<ul><li>4.1 Faulty &amp; defective materials</li><li>4.2 Injury to personnel</li><li>4.3 Measuring fault</li><li>4.4 Chemical mixing ratio</li></ul>

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.

requirements of current version of the Unit of Competency.	
Critical aspects of competency	Assessment required evidences that the candidate:
	1.1 Identified varnish & wood keeper material
	1.2 Identified color for varnish & wood keeper
	1.3 Cleaned and maintained tools and equipment
	2.1 OSH
	2.2 Basic Varnish materials
2. Underpinning	2.3 Properties of Varnish materials
knowledge	2.4 Materials specifications
Kilowieuge	2.5 Measuring instruments and calculations
	2.6 Colours
	2.7 Unexpected situations
	3.1 Identifying Varnish material
	3.2 Identifying different color
	3.3 Using measuring instrument
3. Underpinning skills	3.4 Computing measuring calculation
	3.5 Checking materials quality.
	3.6 Cleaning and storing tools, equipment, and materials as per
	instruction.
	4.1 Commitment to occupational safety and health.
4. Required attitudes	4.2 Promptness in carrying out activities.
	4.3 Sincere and honest to duties.
	4.4 Eagerness to learn.
	4.5 Tidiness and timeliness.
	4.6 Environmental concerns.

	<ul><li>4.7 Respect for rights of peers and seniors at workplace.</li><li>4.8 Communication with peers and seniors at workplace.</li></ul>
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 tools, equipment and physical facilities appropriate to perform activities 5.3 materials, consumables to perform activities.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in NSDA accredited assessment centre</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA

<b>Unit Code and Title</b>	OU-FUR-WC-03-L2-V1: Prepare Surface for Varnish & Wood Keeper
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to Interpret wood coating materials.  It specifically includes the tasks of preparing for work, preparing surface for varnish & wood keeper, applying and removing masking, cleaning and storing tools and equipment.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria Bold & Underlined terms are elaborated in the Range of Variables
Prepare for work	<ul> <li>1.1 PPE are worn and used as per nature of the job.</li> <li>1.2 Hand tools and power tools are collected as per job requirement.</li> <li>1.3 Preparation Materials are collected as per job requirement</li> </ul>

2. Prepare surface for varnish & wood keeper	<ul> <li>2.1 <u>Surfaces</u> are inspected for <u>quality requirement</u></li> <li>2.2 <u>Foreign materials</u> are identified on the surface.</li> <li>2.3 Surfaces are cleaned thoroughly to make it free from foreign materials.</li> <li>2.4 Patchworks are performed on defected surface if required.</li> <li>2.5 Bleaching on the surface are performed if required</li> <li>2.6 Surfaces are sanded smoothly &amp; cleaned as per set <u>standard.</u></li> </ul>
3. Use and remove Maskin tape	<ul><li>3.1 Maskin tape are collected</li><li>3.2 Maskin tape are fixed up on designated area if required</li><li>3.3 Maskin tape are removed after completing the job</li><li>3.4 Designated area is checked and cleaned as required.</li></ul>
4. Clean and store tools and equipment	<ul> <li>4.1 Unused materials are stored or recycled as required.</li> <li>4.2 Tools and equipment are cleaned and stored as per workplace standard</li> <li>4.3 Faulty and defective tools are tagged and reported in accordance with workplace practices.</li> <li>4.4 Waste materials are disposed as per standard</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
Hand tools and power tools	<ul> <li>1.1 Sanding machine</li> <li>1.2 Scraper</li> <li>1.3 Spatula/ stirring stick.</li> <li>1.4 Putty knife</li> <li>1.5 Brush</li> <li>1.6 Blower</li> <li>1.7 Mixing container</li> </ul>
2. Preparation Materials	2.1 Putty (water based, XY clear putty, Wax etc.) 2.2 Clean Cloth or Rag (Marking cloth) 2.3 Sanding paper (0P, 1P, 80P, 120P, 240P etc.)
3. Surfaces	3.1 Solid Wood 3.2 Ply wood 3.3 Woodtex/ Veneer particle board 3.4 Veneer MDF board
4. Quality requirement	<ul><li>4.1 Cleanliness</li><li>4.2 Smoothness</li><li>4.3 Moisture content of the surface</li><li>4.4 Environmental conditions</li></ul>

	5.1 Oil
5. Foreign materials	5.2 Grease
	5.3 Sticker
	5.4 Dust
	5.5 Dirt
	5.6 Nail
	5.7 Glue
	5.8 Debris
	5.9 Other contaminants
6. Standard	6.1 Smoothness
	6.2 Absence of imperfection
	6.3 Dent/hole free
	6.4 Dust free

### **Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.

requirements of current version of the Unit of Competency.	
	Assessment required evidences that the candidate:
	1.1 Performed smooth sanding
1. Critical aspects of	1.2 Inspected surface as per quality requirement
competency	1.3 Identified & removed foreign materials from surface
	1.4 Performed patchwork on defected areas.
	1.5 Cleaned and maintained tools and equipment
	2.1 Hand tools and power tools
	2.2 Sand paper
2. Underpinning	2.3 Quality surface
knowledge	2.4 Foreign materials on surface
	2.5 Maskin & remove Maskin tape
	2.6 Surface defect and patchwork
	3.1 Selecting tools, equipment and materials.
	3.2 Inspecting quality surface
3. Underpinning	3.3 Identifying foreign materials
skills	3.4 Applying putty
SKIIIS	3.5 Using hand tools and power tools
	3.6 Fixing up masking tape and removing from designated area
	3.7 Performing patchwork on defected areas
	4.1 Commitment to occupational safety and health.
	4.2 Promptness in carrying out activities.
4. Required attitudes	4.3 Sincere and honest to duties.
	4.4 Eagerness to learn.
	4.5 Tidiness and timeliness.
	4.6 Environmental concerns.
	4.7 Respect for rights of peers and seniors at workplace.

	4.8 Communication with peers and seniors at workplace.
5. Resource implication	<ul> <li>The following resources must be provided:</li> <li>5.1 workplace (actual or simulated)</li> <li>5.2 tools, equipment and physical facilities appropriate to perform activities</li> <li>5.3 materials, consumables to perform activities.</li> </ul>
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in NSDA accredited assessment center.</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>

<b>Unit Code and Title</b>	OU-FUR-WC-04-L2-V1: Perform primer for Varnish and Wood keeper
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to Interpret wood coating materials.  It specifically includes the tasks of preparing primer materials, performing primer, cleaning and storing tools and equipment.
Nominal Hours	40 Hours
Elements of Competency	Performance Criteria  Bold & Underlined terms are elaborated in the Range of Variables
Prepare primer materials	<ul> <li>1.1 Selected <u>Primer materials</u> are weighed as per ratio</li> <li>1.2 Materials are mixed as per instruction for Varnish</li> <li>1.3 Mixture is checked for application</li> </ul>
2. Perform primer coat	<ul> <li>2.1 Prepared surface is selected and collected</li> <li>2.2 Primer is applied on the prepared surface</li> <li>2.3 Surface is allowed to dry as per requirement.</li> <li>2.4 Primer coating is checked as per set standard.</li> <li>2.5 Additional primer coat is applied if required</li> </ul>

	3.1 Unused materials are stored or recycled as required.
3. Clean and store tools and equipment	3.2 Tools and equipment are cleaned and stored as per workplace
	standard.
	3.3 Faulty and defective tools are tagged and reported in
	accordance with workplace practices.
	3.4 Waste materials are disposed as per standard

### Range of Variables

Variable	Range (may include but not limited to:)
1. Primer materials	<ul> <li>1.1 Putty (water based, XY clear putty, Wax etc.)</li> <li>1.2 Thinner (Spirit, NC thinner, PU thinner etc.)</li> <li>1.3 Wood Filler</li> <li>1.4 Gala</li> <li>1.5 Dye powder (Color)</li> <li>1.6 Chalk powder</li> <li>1.7 Fresh powder</li> <li>1.8 Zinc Oxide Powder</li> <li>1.9 Ella Soil</li> <li>1.10 Clean Cloth (Polish cloth, marking cloth, Jute etc.)</li> <li>1.11 Sanding paper (80P, 120P, 240P etc.)</li> <li>1.12 Mixing pot</li> </ul>
2. Standard	<ul><li>2.1 Proper drying</li><li>2.2 Smooth sanding</li><li>2.3 Absence of imperfection</li><li>2.4 Compatibility with Subsequent Coatings</li></ul>

### **Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.

1	T	
	Assessment required evidences that the candidate:	
1. Critical aspects of	1.1 Performed weighing and mixing of primer materials	
competency	1.2 Performed primer for varnish and wood keeper application	
	1.3 Cleaned and maintained tools and equipment	
	2.1 Materials of primer	
2. Underpinning	2.2 Weighing and mixing of material	
knowledge	2.3 Primer	
	2.4 Standard primer application	
3. Underpinning skills	3.1 Mixing primer materials	
	3.2 Applying primer	
	3.3 Sanding of primer	
4. Required attitudes	4.1 Commitment to occupational safety and health.	
	4.2 Promptness in carrying out activities.	
	4.3 Sincere and honest to duties.	
	4.4 Eagerness to learn.	

	4.5 Tidiness and timeliness.
	4.6 Environmental concerns.
	4.7 Respect for rights of peers and seniors at workplace.
	4.8 Communication with peers and seniors at workplace.
	The following resources must be provided:
5. Resource	5.1 workplace (actual or simulated)
implication	5.2 tools, equipment and physical facilities appropriate to perform activities.
	5.3 materials, consumables to perform activities.
	Methods of assessment may include but not limited to:
6. Methods of	6.1 written test
assessment	6.2 demonstration
	6.3 oral questioning
	6.4 portfolio.
	7.1 Competency assessment must be done in NSDA accredited
7. Contexts of	assessment center
assessment	7.2 Assessment should be done by a NSDA certified/nominated
	assessor

<b>Unit Code and Title</b>	OU-FUR-WC-05-L2-V1: Perform Varnish / Polish on
	wooden surface
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to Interpret wood coating materials.
	It specifically includes the tasks of preparing varnish material, performing varnish material, cleaning and storing tools and equipment.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria
	<b>Bold &amp; Underlined</b> terms are elaborated in the Range of
	Variables
1. Prepare varnish	1.1 Varnish Materials are collected as per job requirement.
material	1.2 Materials are weighed & mixed as per instruction.
	1.3 Mixture is checked for application

Perform varnish coat	<ul> <li>2.1 Prepared varnish is applied on the surface.</li> <li>2.2 Surface is allowed to dry as per requirement.</li> <li>2.3 Varnish coat is checked as per specification.</li> </ul>
	2.4 Additional varnish coat is applied if required
3. Clean and store tools and equipment	<ul> <li>3.1 Unused materials are stored or recycled as required.</li> <li>3.2 Tools and equipment are cleaned and stored as per workplace standard.</li> <li>3.3 Faulty and defective tools are tagged and reported in accordance with workplace practices.</li> <li>3.4 Waste materials are disposed as per standard</li> </ul>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Specification	1.1 Drying time 1.2 Uniform finish 1.3 Coverage 1.4 Perfection (Wiping marks, Uniformity, drips etc.) 1.5 Compatibility
Evidence Guide	1.5 Companionity
The evidence must be	authentic, valid, sufficient, reliable, consistent, recent and meet all t version of the Unit of Competency.
	Assessment required evidence that the candidate:
1. Critical aspects of	1.1 Selected appropriate varnish
competency	1.2 Performed varnish on prepared surface
	1.3 Maintained consistency as per recommendation
	2.1 Varnish material
2. Underpinning	2.2 Mixing varnish material
knowledge	2.3 Preparation of varnish
	2.4 Application of varnish
	3.1 Mixing varnish material
3. Underpinning skills	3.2 Applying varnish on surface
	3.3 Checking proper drying of surface
	3.4 Recoating ability
4. Required attitudes	4.1 Commitment to occupational safety and health.
	4.2 Promptness in carrying out activities.
	4.3 Sincere and honest to duties.
	4.4 Eagerness to learn.
	4.5 Tidiness and timeliness.
	4.6 Environmental concerns.
	4.7 Respect for rights of peers and seniors at workplace.

Communication with peers and seniors at workplace.

4.8

5. Resource implication	<ul> <li>The following resources must be provided:</li> <li>5.1 workplace (actual or simulated)</li> <li>5.2 tools, equipment, and physical facilities appropriate to perform activities.</li> <li>5.3 materials, consumables to perform activities.</li> </ul>
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Contexts of assessment	<ul> <li>7.1 Competency assessment must be done in NSDA accredited assessment center.</li> <li>7.2 Assessment should be done by a NSDA certified/nominated assessor</li> </ul>

Unit Code and Title	OU-FUR-WC-06-L2-V1: Perform Wood keeper on		
	the wooden surface		
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to Interpret wood coating materials.  It specifically includes the tasks of: preparing colour for wood keeper, applying colour for wood keeper, preparing wood keeper, performing wood keeper, cleaning and storing tools and equipment		
Nominal Hours	60 Hours		
Elements of	Performance Criteria		
	<b>Bold &amp; Underlined</b> terms are elaborated in the Range of		
Competency	Variables		
Prepare colour for	1.1 Colors (stainer) & ingredients are selected as required.		
wood keeper	1.2 Colors & Ingredients are weighed & mixed as per ratio.		
wood keeper	1.3 Mixture (Shade tone) is checked for application.		
	2.1 Mixture is applied on the prepared surface		
2. Apply Colour for	2.2 Surface is allowed to dry as per requirement.		
wood keeper	2.3 Colour is checked as per requirement		
	2.4 Additional colour is applied if required		

Prepare wood keeper	<ul><li>3.1 Wood keeper materials are identified and collected</li><li>3.2 Wood keeper materials are weighed &amp; mixed as per instruction.</li><li>3.3 Wood keeper is prepared as per instruction</li></ul>			
	3.4 Mixture is checked for application			
4. Perform Wood keeper	<ul> <li>4.1 Prepared Wood Keeper is applied on the surface.</li> <li>4.2 Surface is allowed to dry as per requirement.</li> <li>4.3 Wood Keeper coating is checked as per set standard</li> <li>4.4 Additional Coat is applied if required</li> </ul>			
5. Clean and store tools and equipment	<ul> <li>5.1 Unused materials are stored or recycled as required.</li> <li>5.2 Tools and equipment are cleaned and stored as per workplace standard.</li> <li>5.3 Faulty and defective tools are tagged and reported in accordance with workplace practices.</li> <li>5.4 Waste materials are disposed as per standard</li> </ul>			

# Range of Variables

Variable	Range (may include but not limited to:)			
1. Colors (Stainer) & ingredients	<ul> <li>1.1 American Walnut</li> <li>1.2 Asian Teak</li> <li>1.3 European Mahogany</li> <li>1.4 Red Mahogany</li> <li>1.5 Ebony Black</li> <li>1.6 Blue, Orange, Green etc.</li> <li>1.7 Swiss yellow</li> <li>1.8 Australian rosewood</li> <li>1.9 African walnut</li> <li>1.10 Antique walnut</li> <li>1.11 Tropical teak</li> <li>1.12 Thinner</li> </ul>			

#### **Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.

	Assessment required evidence that the candidate:			
1.Critical aspects of	1.1 Selected appropriate color for wood keeper			
competency	1.2 Performed wood keeper on prepared surface			
	1.3 Maintained consistency as per recommendation			
	2.1 Color material and matching			
2. Underpinning	2.2 Wood keeper material			
knowledge	2.3 Preparation of wood keeper			
	2.4 Application of wood keeper			
	3.1 Mixing wood keeper material			
3. Underpinning	3.2 Applying wood keeper on surface			
skills	3.3 Checking proper drying of surface			
	3.4 Recoating ability			
4.Required attitudes	4.1 Commitment to occupational safety and health.			
4.required attitudes	4.2 Promptness in carrying out activities.			

	4.3 Sincere and honest to duties.
	4.4 Eagerness to learn.
	4.5 Tidiness and timeliness.
	4.6 Environmental concerns.
	4.7 Respect for rights of peers and seniors at workplace.
	4.8 Communication with peers and seniors at workplace.
	The following resources must be provided:
5.Resource	5.1 workplace (actual or simulated)
implication	5.2 tools, equipment and physical facilities appropriate to perform
implication	activities.
	5.3 materials, consumables to perform activities.
	Methods of assessment may include but not limited to:
6.Methods of	6.1 written test
assessment	6.2 demonstration
assessment	6.3 oral questioning
	6.4 portfolio.
	7.1 Competency assessment must be done in NSDA accredited
7.Contexts of	assessment center
assessment	7.2 Assessment should be done by a NSDA certified/nominated
	assessor

# **Development of Competency Standard**

The Competency Standards for National Skills Certificate Level-02 in Wood Coating is developed by NSDA on 17-20 July 2023.

### List of members:

Sl. No.	Name and Address	Position in the Committee	Signature
1.	Mr. Md. Solaiman Mia	Member	
	Principal Trainer, Berger PTI		
	Berger Paint Bangladesh Limited		
	273-276 Tejgaon Industrial Area, Dhaka		
	Cell: +880 1313498497		
	E-mail: solaiman@bergerbd.com		
2.	Mr. Zillur Rahman Khan	Member	
	Instructor, Civil Technology		
	Dhaka Polytechnic Institute.		
	Cell: +8801711158084		
	E-mail: zillurznf99@gmail.com		
3.	Md Omar Sharif	Member	
	Chemist SB Wood Coating, R&D	110111001	
	Berger Paint Bangladesh Limited		
	Dhaka Factory, Savar, Dhaka		
	Cell: +8801322916412		
	E-mail: omar.sharif@bergerbd.com		
4.	Mr. Md. Anwarul Haque	Member	
1.	Head of Institute, Akhtar Furniture	Member	
	Academy		
	Ford Nagar, Singair, Manikgonj		
	Cell: +8801799949901		
	E-mail: afa.anowarul@gmail.com		
5.	Mr. Md. Abdus Sobahan (Muktar)	Member	
Э.	Manager, Akhtar Furniture Limited	Member	
	S		
	Ford Nagar, Singair, Manikganj Cell: +8801847192072		
		Manalagu	
6.	Mr. Md. Bahauddin (Prince)	Member	
	Area Manager (Sales & Marketing)		
	Asia Coating Pvt. Ltd		
	Cell: +8801730341252		
	E-mail: bahauddin.prince@asia-		
	coatings.com	N/ 1	
7.	Mr. Rakib Ur Rahman Chowdhury	Member	
	Manager Business Development – WC		
	Berger Paint Bangladesh Limited		
	273-276 Tejgaon Industrial Area, Dhaka		
	Cell: +8801713158595		
	E-mail: rakibur@bergerbd.com		
8.	A.M. Zahirul Islam	Member	
	Specialist4(CS, CBC, CBLM &		
	Assessment)		
	National Skills Development Authority		
	(NSDA)		
	Cell: +880 1740920809		
	Email: zahir.nsda@gmail.com		

# **Validation of Competency Standard**

The Competency Standards for National Skills Certificate in Wood Coating, Level- 2 is validated by NSDA 16 August 2023.

### **List of Members of SCVC**

Sl. No.	Name and Address	Position in the committee	Signature
1.	Mr. A Karim Majumder		
	Managing Director, Nadia Furniture Ltd.		
	Singair, Manikganj	Chairperson	
	Cell: +8801819-241830,		
	Email: karim@nadiafurniture.com		
2.	Mr. Md. Solaiman Mia		
	Principal Trainer, Berger PTI		
	Berger Paint Bangladesh Limited	Member	
	273-276 Tejgaon Industrial Area, Dhaka	Tromber	
	Cell: +8801313498497		
	E-mail: solaiman@bergerbd.com		
3.	Mr. Kalyan Brata Das		
	Quality Assurance Officer		
	Bangladesh Technical Education Board	Member	
	Agargaon, Sher-e-Bangla Nagar, Dhaka		
	Cell: +8801711507215		
1	E-mail: kb.das2013@gmail.com		
4.	Mr. Md. Anwarul Haque Head of Institute, Akhtar Furniture Academy		
	Ford Nagar, Singair, Manikganj	Member	
	Cell: +8801799949901	Member	
	E-mail: afa.anowarul@gmail.com		
5.	Mr. Md. Bahauddin (Prince)		
0.	Area Manager (Sales & Marketing)		
	Asia Coating Pvt. Ltd	Member	
	Cell: +8801730341252		
	E-mail: bahauddin.prince@asia-coatings.com		
6.	Mr. Md. Sohel Rana		
	Senior Supervisor, Akhtar Furniture Limited		
	Ford Nagar, Singair, Manikganj	Member	
	Cell: +8801705951304		
	E-mail: ranas8486@gmail.com		
7.	Mr. Rakib Ur Rahman Chowdhury		
	Manager Business Development – WC		
	Berger Paint Bangladesh Limited	Member	
	273-276 Tejgaon Industrial Area, Dhaka	Wichibei	
	Cell: +8801713158595		
	E-mail: rakibur@bergerbd.com		
8.	A.M. Zahirul Islam		
	Specialist4(CS, CBC, CBLM & Assessment)		
	National Skills Development Authority (NSDA)	Member	
	Cell: +880 1740920809		
	Email: zahir.nsda@gmail.com		

### **Workshop Minutes**

Government of the People's Republic of Bangladesh Prime Minister's Office National Skills Development Authority Level: 10-11, Biniyog Bhaban,

E-6 / B, Agargaon, Sher-E-Bangla Nagar, Dhaka-1207, Bangladesh.

Email: ec@nsda.gov.bd Website: www.nsda.gov.bd.

Minutes of the Competency Standard Validation Workshop on "Wood Coatings, L-2".

Chairman	Mr. A Karim Majumder, Chairman, Furniture sector ISC	
Date	: 16 August, 2023	
Time	: 9:00 am - 4:00 pm	
Place	: ISC Conference Room, NSDA, Biniyog Bhaban, Agargaon, Dhaka-1207	

The Chairman welcomed all those present and started the work of the workshop. During the day-long workshop, the competency standard of **Wood Coating, L-2** was reviewed and finalized in detail. The activities related to the finalized standard through validation workshop are presented below:

SL No  Content of validation  Name and level of Occupation  No  No  No  No  No  No  No  No  No	are pr	are presented below.				
1 Name and level of Occupation 2 Nominal Hour 3 Unit of Competency 4 Element    No Relevant performance criteria were updated and reorganized as per necessity of the current technology. 3 Variables    No Relevant performance criteria were updated and reorganized as per necessity of the current technology. 3 Variables    Oritical aspect of Competency 3 Underpinning knowledge    Underpinning Skills    No No Recessary addition, changings and refinements have been made.    No No Recessary added, changes and refinements have been made.    No No Recessary added, changes and refinements have been made.		Content of validation	it appro te	was opria	What actions have been taken if not appropriate?	
1       Occupation       Yes         2       Nominal Hour       Yes         3       Unit of Competency       Yes         4       Element       No       Appropriate changes (action verb and suitable terminology) have been made in the relevant field of industry.         5       Performance Criteria       No       Relevant performance criteria were updated and reorganized as per necessity of the current technology.         3       Variables       No       As the requirement of industry, we have changed some variables and also added new variable         3       Critical aspect of Competency       No       Appropriate changes have been made in the critical aspect of competency as per the change of units.         3       Underpinning knowledge       No       No       Necessary addition, changings and refinements have been made.         9       Underpinning Skills       No       No       Necessary added, changes and refinements have been made.         10       Attitude       Yes         11       Resources       Yes			res	INO		
3	1		Yes			
Appropriate changes (action verb and suitable terminology) have been made in the relevant field of industry.  Performance Criteria  No Relevant performance criteria were updated and reorganized as per necessity of the current technology.  No As the requirement of industry, we have changed some variables and also added new variable  Critical aspect of Competency  No As the requirement of industry, we have changed some variables and also added new variable  Appropriate changes have been made in the critical aspect of competency as per the change of units.  No Necessary addition, changings and refinements have been made.  No No Attitude Yes  Relevant performance criteria were updated and reorganized as per necessity of the current technology.  No No No No No No No No Necessary addition, changings and refinements have been made.  No No No Necessary added, changes and refinements have been made.	2	Nominal Hour	Yes			
4 Element No terminology) have been made in the relevant field of industry.  5 Performance Criteria No Relevant performance criteria were updated and reorganized as per necessity of the current technology.  3 Variables No As the requirement of industry, we have changed some variables and also added new variable  4 Performance Criteria No Relevant performance criteria were updated and reorganized as per necessity of the current technology.  5 As the requirement of industry, we have changed some variables and also added new variable aspect of competency as per the change of units.  6 No Recessary addition, changings and refinements have been made.  7 No Recessary added, changes and refinements have been made.  8 No Recessary added, changes and refinements have been made.  9 Underpinning Skills No Recessary added, changes and refinements have been made.	3	Unit of Competency	Yes			
Ferformance Criteria  No reorganized as per necessity of the current technology.  No Reorganized as per necessity of the current technology.  No Recessary addition, changings and refinements have been made.  No Recessary added, changes and refinements have been made.  No Recessary added, changes and refinements have been made.  No Recessary added, changes and refinements have been made.	4			No	terminology) have been made in the relevant field of	
Some variables and also added new variable  Critical aspect of Competency  Underpinning knowledge  Underpinning Skills  Appropriate changes have been made in the critical aspect of competency as per the change of units.  No Necessary addition, changings and refinements have been made.  No Necessary added, changes and refinements have been made.  Attitude  Yes  Resources  Yes	5	Performance Criteria		No	reorganized as per necessity of the current	
Competency as per the change of units.  Underpinning knowledge No No No Necessary addition, changings and refinements have been made.  Underpinning Skills No No Necessary added, changes and refinements have been made.  Attitude Yes No No No Necessary added, changes and refinements have been made.	3	Variables		No		
Knowledge	3	5.155 5.5p.55 5.		No		
9 Underpinning Skills No been made.  10 Attitude Yes 11 Resources Yes	3			No		
11 Resources Yes	9	Underpinning Skills		No	· · · · · · · · · · · · · · · · · · ·	
11 Resources Yes	10	Attitude	Yes			
12 Assessment Methods Yes	11	Resources				
	12	Assessment Methods	Yes			

Through the above activities, the Competency Standard has been finalized and validated as "Wood Coating, Level-2"

Chairman
Standard and Curriculum Validation Committee,
Chairman - FSISC