

National Technical and Vocational Qualifications Framework

NTVQF

**Competency Standards
for
Body and Glaze Preparing,
NTVQF Level – I, II, III & IV.**



Bangladesh Technical Education Board (BTEB)
Agargaon, Sher-E-Bangla Nagar, Dhaka-1207

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Introduction

These Competency Standards were developed by the Technical Sub Committee (TSC) that was established by **Ceramic Industry Skills Council**. The rules of Skill Development Policy are maintained to develop the standards. The competency standards are the foundation on which new competency-based curriculum will be developed that responds better to the needs of industry for skilled workers. The members of the TSC are primarily from industry and training institutes. The members were trained and guided by an International Expert and National Experts to develop the standard. Persons who will successfully complete the new TVET programs based on these competency standards will receive a qualification in the new National Technical and Vocational Qualification Framework (NTVQF).

Competency Standards are nationally agreed and industry-determined competencies required for effective work performance. These are presented in a consistent format following sequence such as:

- Unit Title
- Unit Code
- Nominal Hours
- Unit descriptor
- Elements and performance criteria
- Range of Variables
- Evidence Guide

The Competency Standards are the core element for training, assessment and certification of skilled workers. Candidates who are successful in the assessment will receive a qualification in the National Technical and Vocational Qualification Framework (NTVQF).

The Competency Standard for Body and Glazing Preparing was developed by the Technical Sub Committee (TSC) that was established under the **Ceramic Industry Skills Council Technology Industry Skill Council**. The technical support was provided by BTEB. The technical experts are primarily from industry nominated by Industry Skills Council with representatives from the Bangladesh Technical Education Board (BTEB), involved in this occupation. The Standards and Curriculum Development Committee (SCDC) of BTEB reviewed this.

The development of Competency Standards was assisted by the Bangladesh Skills for Employment and Productivity Project (B-SEP) funded by the Government of Canada.

Endorsed by

Industry Skills Council
Date:

Approved by

Bangladesh Technical Education Board (BTEB)
Date:

National Competency Standard for National Skill Certificate – I, II, III & IV in Body and Glazing Preparing in Ceramic Sector

Bangladesh NTVQF with Job Classifications

NTVQF LEVELS	EDUCATION SECTORS			Job Classification
	Pre-Vocation Education	Vocational Education	Technical Education	
NTVQF 6			Diploma in engineering or equivalent	Middle Level Manager / Sub Assistant Engr. etc.
NTVQF 5		National Skill Certificate 5 (NSC 5)		Highly Skilled Worker / Supervisor
NTVQF 4		National Skill Certificate 4 (NSC 4)		Skilled Worker
NTVQF 3		National Skill Certificate 3 (NSC 3)		Semi-Skilled Worker
NTVQF 2		National Skill Certificate 2 (NSC 2)		Basic Skilled Worker
NTVQF 1		National Skill Certificate 1 (NSC 1)		Basic Worker
Pre-Voc 2	National Pre-Vocation Certificate 2 (NPVC 2)			Pre-Vocation Trainee
Pre-Voc 1	National Pre-Vocation Certificate 1 (NPVC 1)			Pre-Vocation Trainee

The pre-vocational levels prepare the participant for training while learning programs at the various levels of the NTVQF prepare the participant for the workforce.

At the completion of the pre-vocational programs the participants would move into training programs at the NTVQF levels.

Annex 1: NTVQF Level Descriptors

NTVQF Level	Knowledge	Skill	Responsibility	Job Class.
6	<ul style="list-style-type: none"> Comprehensive actual and theoretical knowledge within a specific study area with an awareness of the limits of that knowledge. 	<ul style="list-style-type: none"> Specialised and restricted range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems 	<ul style="list-style-type: none"> Manage a team or teams in workplace activities where there is unpredictable change Identify and design learning programs to develop performance of team members 	Supervisor / Middle Level Manager / Sub Assistant Engr. etc.
5	<ul style="list-style-type: none"> Very broad knowledge of the underlying, concepts, principles, and processes in a specific study area 	<ul style="list-style-type: none"> Very broad range of cognitive and practical skills required to generate solutions to specific problems in one or more study areas. 	<ul style="list-style-type: none"> Take overall responsibility for completion of tasks in work or study Apply past experiences in solving similar problems 	Highly Skilled Worker / Supervisor
4	<ul style="list-style-type: none"> Broad knowledge of the underlying, concepts, principles, and processes in a specific study area 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Take responsibility, within reason, for completion of tasks in work or study Apply past experiences in solving similar problems 	Skilled Worker
3	<ul style="list-style-type: none"> Moderately broad knowledge in a specific study area. 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Work or study under supervision with some autonomy 	Semi-Skilled Worker
2	<ul style="list-style-type: none"> Basic underpinning knowledge in a specific study area. 	<ul style="list-style-type: none"> Basic skills required to carry out simple tasks 	<ul style="list-style-type: none"> Work or study under indirect supervision in a structured context 	Basic Skilled Worker
1	<ul style="list-style-type: none"> Elementary understanding of the underpinning knowledge in a specific study area. 	<ul style="list-style-type: none"> Limited range of skills required to carry out simple tasks 	<ul style="list-style-type: none"> Work or study under direct supervision in a structured context 	Basic Worker
Pre-Voc 2	<ul style="list-style-type: none"> Limited general knowledge 	<ul style="list-style-type: none"> Very limited range of skills and use of tools required to carry out simple tasks 	<ul style="list-style-type: none"> Work or study under direct supervision in a well-defined, structured context. 	Pre-Vocation Trainee
Pre-Voc 1	<ul style="list-style-type: none"> Extremely limited general knowledge 	<ul style="list-style-type: none"> Minimal range of skills required to carry out simple tasks 	<ul style="list-style-type: none"> Simple work or study exercises, under direct supervision in a clear, well defined structured context 	Pre-Vocation Trainee

List of Abbreviation

General

BSEP	Bangladesh Skills for Employability and Productivity
BTEB	Bangladesh Technical Education Board
DTE	Directorate of Technical Education
ILO	International Labour Organization
ISC	Industry Skills Council
NPVC	National Pre-Vocation Certificate
NTVQF	National Technical and Vocational Qualification Framework
SAARC	South Asian Association for Regional Cooperation
SCDC	Standards and Curriculum Development Committee
TVET	Technical and Vocational Education and Training
UoC	Unit of Competency
TSC	Technical Sub Committee

Occupation Specific Abbreviations

BGP	Body and Glaze Preparing
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment

The Qualification of the Competency Standards

1. Title of Qualification: National Skill Certificate – I, II, III & IV in Body and Glaze Preparing in Ceramic Sector	
2. Qualification Code:	CERDEP
3. Endorsement Date:	20th March, 2017
4. Purpose of the Qualification	<p>The NSC - I in Body and Glaze Preparing Qualification consists of a set Body and Glaze Preparing works of competencies that a person must achieve in order to work competently in the Ceramic Sector as a Operator Assistant. In particular, he / she should be able to:</p> <ol style="list-style-type: none"> 1. Use basic mathematical concepts 2. Apply Occupational Safety and Health (OSH) practices at workplace 3. Work in the ceramic industry 4. Use measuring tools and equipment 5. Prepare raw materials 6. Perform crushing of stone materials 7. Perform grinding of crushed materials <p>The NSC - II in Body and Glaze Preparing Qualification consists of a set Body and Glaze Preparing works of competencies that a person must achieve in order to work competently in the Ceramic Sector as a Junior Operator. In particular, he / she should be able to:</p> <ol style="list-style-type: none"> 1. Use English in the workplace 2. Operate in a self-directed team 3. Present and apply workplace information 4. Handle dangerous good / hazardous substances 5. Charge ball mill 6. Perform blunging and aging of slip 7. Vibrate screen <p>The NSC - III in Body and Glaze Preparing Qualification consists of a set Body and Glaze Preparing works of competencies that a person must achieve in order to work competently in the Ceramic Sector as Operator. In particular, he / she should be able to:</p> <ol style="list-style-type: none"> 1. Perform computer operations 2. Participate in environmentally sustainable work practices

	<ol style="list-style-type: none"> 3. Read and interpret work documents 4. Use magnetic iron separator 5. Prepare filter cake using filter press 6. Perform auguring <p>The NSC - IV in Body and Glaze Preparing Qualification consists of a set Body and Glaze Preparing works of competencies that a person must achieve in order to work competently in the Ceramic Sector as Sr. Operator.</p> <p>In particular, he / she should be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate work values 2. Lead small team 3. Convert slip to granular powder 4. Prepare casting slip 5. Prepare glaze 6. Apply quality standards
5. Regulatory Arrangements	The holder of this qualification should have been assessed by a BTEB certified assessor and found to be competent in the units listed.
6. Accreditation Requirements	The qualifications shall be offered in compliance with the accreditation requirements set by BTEB.
7. Transition Arrangements	In the absence of certified assessors, the BTEB shall appoint trainers who have undergone assessment trainings.
8. Contact for Comments	Chairman Bangladesh Technical Education Board (BTEB) Agargaon, Sher-E-Bangla Nagar, Dhaka - 1207

National Competency Standards for National Skills Certificate – I, II, III & IV in Body and Glaze Preparing in Ceramic Sector

Course Structure

SL	Unit Code and Title		UoC Level	Nominal Duration (Hours)
The Generic Competencies (08 UoCs required)				290
1.	GN1001A1	Use Basic Mathematical Concepts	1	40
2.	GN1002A1	Apply Occupational Safety and Health (OSH) Practices at Workplace	1	30
3.	GN2003A1	Use English in the Workplace	2	70
4.	GN2004A1	Operate in a Self-directed Team	2	20
5.	GN2005A1	Present and Apply Workplace Information	2	30
6.	GN3006A1	Demonstrate Work Values	3	20
7.	GN3008A1	Perform Computer Operations	3	60
8.	GN3010A1	Lead Small Team	3	20
The Sector Specific Competencies (05 UoCs required)				110
1.	CERSS1001A1	Work in the Ceramic Industry	1	20
2.	CERSS1002A1	Use Measuring Tools and Equipment	1	20
3.	CERSS2003A1	Handle Dangerous Good / Hazardous Substances	2	20
4.	CERSS3004A1	Participate in Environmentally Sustainable Work Practices	3	25
5.	CERSS3005A1	Read and Interpret Work Documents	3	25
The Occupation Specific Competencies (13 UoCs required)				860
1.	CERBGP1001A1	Prepare Raw Materials	1	70
2.	CERBGP1002A1	Perform Crushing of Stone Materials	1	90
3.	CERBGP1003A1	Perform Grinding of Crushed Materials	1	90

4.	CERBGP2004A1	Charge Ball Mill	2	90
5.	CERBGP2005A1	Perform Blunging and Aging of Slip	2	30
6.	CERBGP2006A1	Vibrate Screen	2	40
7.	CERBGP3007A1	Use Magnetic Iron Separator	3	30
8.	CERBGP3008A1	Prepare Filter Cake Using Filter Press	3	90
9.	CERBGP3009A1	Perform Auguring	3	80
10.	CERBGP4010A1	Convert Slip to Granular Powder	4	100
11.	CERBGP4011A1	Prepare Casting Slip	4	60
12.	CERBGP4012A1	Prepare Glaze	4	60
13.	CERGLZ4013A1	Apply Quality Standards	4	30
Total Nominal Learning Hours				1260

**National Competency Standards for National Skills Certificate – I, II, III & IV in
Body and Glaze Preparing in Ceramic Sector**

Course Structure – Level - I

SL	Unit Code & Title		NTVQF Level	Nominal Hours
The Generic Competencies (02 UoCs required)				70
1.	GN1001A1	Use Basic Mathematical Concepts	1	40
2.	GN1002A1	Apply Occupational Safety and Health (OSH) Practices at Workplace	1	30
The Sector Specific Competencies (02 UoC required)				40
1.	CERSS1001A1	Work in the Ceramic Industry	1	20
2.	CERSS1002A1	Use Measuring Tools and Equipment	1	20
The Occupation Specific Competencies (03 UoCs required)				250
1.	CERBGP1001A1	Prepare Raw Materials	1	70
2.	CERBGP1002A1	Perform Crushing of Stone Materials	1	90
3.	CERBGP1003A1	Perform Grinding of Crushed Materials	1	90
Total Learning Hour				360
On-the Job Training				160
Total Nominal Hours				520

**National Competency Standards for National Skills Certificate – I, II, III & IV in
Body and Glaze Preparing in Ceramic Sector**

Course Structure – Level - II

SL	Unit Code & Title		NTVQF Level	Nominal Hours
The Generic Competencies (03 UoCs required)				120
1.	GN2003A1	Use English in the Workplace	2	70
2.	GN2004A1	Operate in a Self-directed Team	2	20
3.	GN2005A1	Present and Apply Workplace Information	2	30
The Sector Specific Competencies (01 UoC required)				20
1.	CERSS2003A1	Handle Dangerous Good / Hazardous Substances	2	20
The Occupation Specific Competencies (03 UoCs required)				160
1.	CERBGP2004A1	Charge Ball Mill	2	90
2.	CERBGP2005A1	Perform Blunging and Aging of Slip	2	30
3.	CERBGP2006A1	Vibrate Screen	2	40
Total Learning Hours				300
On-the Job Training				216
Total Nominal Hours				516

**National Competency Standards for National Skills Certificate – I, II, III & IV in
Body and Glaze Preparing in Ceramic Sector**

Course Structure – Level - III

SL	Unit Code & Title		NTVQF Level	Nominal Hours
The Generic Competencies (01 UoCs required)				60
1.	GN3008A1	Perform Computer Operations	3	60
The Sector Specific Competencies (02 UoC required)				50
1.	CERSS3004A1	Participate in Environmentally Sustainable Work Practices	3	25
2.	CERSS3005A1	Read and Interpret Work Documents	3	25
The Occupation Specific Competencies (03 UoCs required)				200
1.	CERBGP3007A1	Use Magnetic Iron Separator	3	30
2.	CERBGP3008A1	Prepare Filter Cake Using Filter Press	3	90
3.	CERBGP3009A1	Perform Auguring	3	80
Total Learning Hours				310
On-the Job Training				216
Total Nominal Hours				526

**National Competency Standards for National Skills Certificate – I, II, III & IV in
Body and Glaze Preparing in Ceramic Sector**

Course Structure – Level - IV

SL	Unit Code & Title		NTVQF Level	Nominal Hours
The Generic Competencies (02 UoC required)				40
1.	GN3006A1	Demonstrate Work Values	3	20
2.	GN3010A1	Lead Small Team	3	20
The Occupation Specific Competencies (04 UoCs required)				250
1.	CERBGP4010A1	Convert Slip to Granular Powder	4	100
2.	CERBGP4011A1	Prepare Casting Slip	4	60
3.	CERBGP4012A1	Prepare Glaze	4	60
4.	CERGLZ4013A1	Apply Quality Standards	4	30
Total Learning Hours				290
On-the Job Training				216
Total Nominal Hours				506

The Generic Competencies

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Use Basic Mathematical Concepts	
Unit Code	GN1001A1	
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use basic mathematical concepts. It includes identifying calculation requirements in the workplace, selecting appropriate mathematical methods for calculation and using mathematical concepts to calculate workplace calculation.	
Nominal Hours	40 Hours	
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables	
1. Identify calculation requirements in the workplace	1.1 Calculation requirements are identified from <i>workplace information</i> .	1.2 Workplace calculations are interpreted.
2. Select appropriate mathematical methods for calculation	2.1 Appropriate <i>mathematical methods</i> are selected to carry out the calculation.	2.2 <i>System and units of measurement</i> to be followed are determined.
3. Use basic mathematical concepts to calculate workplace calculation	3.1 Calculations are completed using appropriate methods such as addition, subtraction, multiplication and division.	3.2 Systems and units of measurement for the task are applied to workplace calculation.
Range of Variables		
Variable	Range (may include but not limited to):	
1. Workplace information	1.1 Project documents 1.2 Graphs 1.3 Charts 1.4 Tables 1.5 Spread sheets 1.6 Item price quotations 1.7 Equipment manuals	

2. Mathematical methods	<ul style="list-style-type: none"> 2.1 Addition 2.2 Subtraction 2.3 Division 2.4 Multiplication 2.5 Ratio on any types of real values (such as whole numbers, fractional numbers, percentages, numbers with exponents)
3. System and units of measurement	<ul style="list-style-type: none"> 3.1 Measurement 3.2 Volume 3.3 Weight 3.4 Mass 3.5 Density 3.6 Percentage 3.7 Length / Breadth / Thickness 3.8 Capacity 3.9 Time 3.10 Temperature 3.11 Budget, Pay / Wages, leave entitlements 3.12 Material usage 3.13 Speed 3.14 Costing
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 applied mathematical methods such as addition, subtraction, division and multiplication to workplace calculations.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Calculation requirements in the workplace. 2.2 Select appropriate mathematical methods. 2.3 Equipment and tools required for calculation. 2.4 Mathematical language, symbols and terminology. 2.5 Application of units. 2.6 Workplace information. 2.7 Use arithmetic processes to find solutions of simple mathematical problems.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Identifying calculation requirements from workplace information. 3.2 Selecting appropriate mathematical methods. 3.3 Using appropriate mathematical methods. 3.4 Using mathematical language, symbols and terminology

	<p>3.5 Applying appropriate units of measurement for volume, weight, density, percentage etc.</p> <p>3.6 Ability to include workplace information (project documents, graphs, charts, tables, spread sheets, item price quotations, equipment manuals).</p> <p>3.7 Identifying calculation requirements form workplace information.</p> <p>3.8 Using arithmetic processes to find solutions of simple mathematical problems.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated)</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities</p> <p>5.3 materials consumable to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test</p> <p>6.2 demonstration</p> <p>6.3 oral questioning</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Apply Occupational Safety and Health (OSH) Practices at Workplace
Unit Code	GN1002A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) practices at workplace. It includes identifying, controlling and reporting OSH hazards, conducting work safely, following emergency response procedures and maintaining and improving health and safety in the workplace.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables
1. Identify, control and report OSH hazards	<p>1.1 Immediate work area is routinely checked for Occupational Safety and Health (OSH) hazards prior to commencing and during work.</p> <p>1.2 Hazards and unacceptable performance are identified and corrective action is taken within the level of responsibility.</p> <p>1.3 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.4 Safety signs and symbols are identified and followed.</p>
2. Conduct work safely	<p>2.1 OSH practices are applied in the workplace.</p> <p>2.2 Personal Protective Equipment (PPE) is used.</p>
3. Follow emergency response procedures	<p>3.1 Emergency situations are identified and reported according to workplace requirements.</p> <p>3.2 Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.</p> <p>3.3 Workplace procedures for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities.</p>

4. Maintain and improve health and safety in the workplace	<p>4.1 Risks are identified and appropriate control measures are implemented in the workplace.</p> <p>4.2 Recommendations arising from risk assessments are implemented within level of responsibility.</p> <p>4.3 Opportunities for improving OSH performance are identified and raised with relevant personnel.</p> <p>4.4 Safety records are maintained according to company policies.</p>
Range of Variables	
Variables	Range (may include but not limited to):
1. Hazards	<p>1.1 OSH incidents include near misses, injuries, illnesses and property damage, noise, handling hazardous substances, other hazards.</p> <p>1.2 Working with and near moving equipment / load shifting equipment.</p> <p>1.3 Broken or damaged equipment or materials.</p>
2. Personal Protective Equipment (PPE)	<p>2.1 Apron</p> <p>2.2 Safety helmet</p> <p>2.3 Goggles</p> <p>2.4 Ear muffs</p> <p>2.5 Ear plugs</p> <p>2.6 Gloves</p> <p>2.7 Clothing</p> <p>2.8 Safety boots</p>
3. Workplace procedures	<p>3.1 OSH system and related documentation including policies and procedures.</p> <p>3.2 Standard Operating Procedures (SOPs).</p> <p>3.3 Information on hazards and work process, hazard alerts, safety signs and symbols.</p> <p>3.4 Labels.</p> <p>3.5 Material Safety Data Sheets (MSDSs) and manufacturers' advice.</p>
4. Company policies	<p>4.1 Job related Standard Operating Procedures (SOPs).</p> <p>4.2 Occupational Safety and Health (OSH) specific procedures.</p> <p>Examples of OSH procedures include – consultation and participation, emergency response to specific hazards, incident investigation, risk assessment, reporting arrangement and issue resolution procedures.</p>
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	

1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ol style="list-style-type: none"> 1.1 used Personal Protective Equipment (PPE); 1.2 identified hazards; 1.3 took corrective action of different hazards; 1.4 took corrective action for emergency procedure; 1.5 reported emergency situation to the supervisor / manger; and 1.6 satisfied requirements mentioned in the performance criteria and range of variables.
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1 OSH workplace policies and procedures. 2.2 Work safety procedures. 2.3 Fire and emergency procedures. 2.4 Types of hazards (Biological, Chemical and Physical) and their effects. 2.5 PPE types and uses. 2.6 Personal hygiene practices. 2.7 OSH awareness. 2.8 Steps of hazard identification. 2.9 Principles of hazards control. 2.10 Employer's role. 2.11 Supervisor's responsibilities.
3. Underpinning skills	<ol style="list-style-type: none"> 3.1 Identifying OSH policies and procedures. 3.2 Following personal work safety practices. 3.3 Reporting hazards and risks. 3.4 Responding to emergency procedures. 3.5 Maintaining physical well-being in the workplace. 3.6 Identify tools and equipment related to OSH. 3.7 Improving OSH performance.
4. Required attitudes	<ol style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Sincere and honest to duties. 4.3 Promptness in carrying out activities. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect of peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.
5. Resource implications	<p>The following resources must be provided:</p> <ol style="list-style-type: none"> 5.1 workplace (actual or simulated); 5.2 tools and equipment appropriate to workplace; 5.3 materials relevant to the proposed activity; 5.4 all tools, equipment, material and documentation required; and 5.5 relevant specifications or work instructions.

6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Use English in the Workplace
Unit Code	GN2003A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use English in the workplace. It includes reading and understanding workplace documents in English; writing simple routine workplace documents in English; listening to conversation in English; and performing conversation in English.
Nominal Hours	70 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables
1. Read and understand workplace documents in English	1.1 <i>Workplace documents</i> are read and understood. 1.2 <i>Visual information</i> is interpreted.
2. Write simple routine workplace documents in English	2.1 Simple routine workplace documents are prepared using key words, phrases, simple sentences and visual aids where appropriate. 2.2 Key information is written in the appropriate places in standard forms.
3. Listen to conversation in English	3.1 Active listening in English language is demonstrated to required workplace standard.
4. Perform conversation in English	4.1 Conversation is performed in English with peers, customers and management to required workplace standard.
Range of Variables	
Variable	Range (may include but not limited to):
1. Workplace documents	1.1 Schedules and itineraries 1.2 Agenda 1.3 Simple reports such as progress and incident reports

	<ul style="list-style-type: none"> 1.4 Job sheets 1.5 Operational manuals 1.6 Brochures and promotional material 1.7 Visual and graphic materials 1.8 Standards 1.9 OSH information
2. Visual information	<ul style="list-style-type: none"> 2.1 Signs 2.2 Maps 2.3 Diagrams 2.4 Forms 2.5 Labels 2.6 Graphs 2.7 Charts
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 used basic English in the workplace; 1.2 read and understood workplace documents in English; 1.3 constructed simple routine workplace documents in English; 1.4 listened to conversation in English; and 1.5 communicated with peers, customers and management using English to the required workplace standard.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Read workplace documents in English. 2.2 Write simple routine workplace documents in English. 2.3 Listen to conversation in English. 2.4 Perform conversation in English. 2.5 Interaction skills (i.e., teamwork, interpersonal skills, etc.). 2.6 Job roles, responsibilities and compliances.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Reading and understanding workplace documents in English. 3.2 Using appropriate vocabulary and grammar, and standard spelling and punctuation. 3.3 Writing simple routine workplace documents in English, such as: schedules and agendas, job sheets, operational manuals and brochures, and promotional material. 3.4 Demonstrating listen English language to required workplace standard.

	<p>3.5 Performing conversation in English with peers, customers and management.</p> <p>3.6 Working effectively with others.</p> <p>3.7 Listening and questioning skills.</p> <p>3.8 Following simple directions.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resources implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables needed to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completing of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Operate in a Self-directed Team
Unit Code	GN2004A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to operate in a self-directed team. It includes identifying team goals and processes, communicating and cooperating with team members, working as a team member and solving problem as a team member.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> words are detailed in the Range of Variables
1. Identify team goals and processes	<p>1.1 Team goals and processes are identified.</p> <p>1.2 <i>Roles and responsibilities</i> of team members are identified.</p> <p>1.3 Relationships within team and with other work areas identified.</p>
2. Communicate and cooperate with team members	<p>2.1 Effective <i>interpersonal skills</i> are used to interact with team members and to contribute to activities and objectives.</p> <p>2.2 Formal and informal <i>forms of communication</i> are used effectively to support team achievement.</p> <p>2.3 Diversity is respected and valued in team functioning.</p> <p>2.4 Views and opinions of other team members are understood and reflected accurately.</p> <p>2.5 <i>Workplace terminology</i> is used correctly to assist communication.</p>
3. Work as a team member	<p>3.1 Duties, responsibilities, authorities, objectives and task requirements are identified and clarified with team.</p> <p>3.2 Tasks are performed in accordance with organizational and team requirements, specifications and workplace procedures.</p> <p>3.3 Team members support other members as required to ensure team achieves goals and requirements.</p> <p>3.4 Agreed reporting lines are followed using standard operating procedure.</p>

4. Solve problems as a team member	<p>4.1 Current and potential problems faced by team are identified.</p> <p>4.2 Procedures for avoiding and managing problems are identified.</p> <p>4.3 Problems solving activities are applied effectively and, in a manner, which supports the team.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Roles and responsibilities	<p>1.1 Contributing to overall project objectives</p> <p>1.2 Completing individual deliverables</p> <p>1.3 Providing expertise</p> <p>1.4 Working with users to establish and meet business needs</p> <p>1.5 Documenting the process</p>
2. Interpersonal skills	<p>2.1 Verbal communication</p> <p>2.2 Non-verbal communication</p> <p>2.3 Listening skills</p> <p>2.4 Negotiation</p> <p>2.5 Problem-solving</p> <p>2.6 Decision-making</p> <p>2.7 Assertiveness</p>
3. Forms of communication	<p>3.1 Verbal communication</p> <p>3.2 Written communication</p> <p>3.3 Nonverbal communication</p>
4. Workplace terminology	<p>4.1 Career</p> <p>4.2 Field</p> <p>4.3 Occupation</p> <p>4.4 Job</p> <p>4.5 Position</p> <p>4.6 Profession</p> <p>4.7 Industry</p> <p>4.8 Career field</p> <p>4.9 Business</p> <p>4.10 Trade</p> <p>4.11 Employer</p> <p>4.12 Organization</p> <p>4.13 Enterprise</p> <p>4.14 Firm</p> <p>4.15 Administrator</p> <p>4.16 Manager</p> <p>4.17 ACR</p>

5. Problems solving activities	5.1 Identifying the problem 5.2 Consider solutions 5.3 Action 5.4 Follow-up
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. Critical aspects of competency	Assessment required evidences that the candidate: <ol style="list-style-type: none"> 1.1 worked effectively within a team; 1.2 dealt with a range of communication / information at one time; 1.3 made constructive contributions in workplace issues; 1.4 sought workplace issues effectively; 1.5 responded to workplace issues promptly; 1.6 presented information clearly and effectively in written form; 1.7 used appropriate sources of information; 1.8 asked appropriate questions; and 1.9 provided accurate information.
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1 Organizational requirements for written and electronic communication methods. 2.2 Effective verbal communication methods.
3. Underpinning skills	<ol style="list-style-type: none"> 3.1 Organizing information. 3.2 Understanding and conveying intended meaning. 3.3 Participating in variety of workplace discussions. 3.4 Complying with organization requirements for the use of written and electronic communication methods.
4. Required attitudes	<ol style="list-style-type: none"> 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 concern. 4.7 Respect to peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.

5. Resource implications	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 materials relevant to the proposed activity;</p> <p>5.3 all tools, equipment, material and documentation required; and</p> <p>5.4 Relevant specifications or work instructions.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completing of module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Present and Apply Workplace Information
Unit Code	GN2005A1
Nominal Hours	This unit covers the knowledge, skills and attitudes required to present and apply workplace information. It includes identifying information requirements, processing data, analyzing, interpreting and organizing information and applying and presenting workplace information.
Unit Descriptor	30 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables
1. Identify information requirements	1.1 <i>Sources of information</i> requirements in the workplace are identified. 1.2 Sources of Information requirements in the workplace are interpreted.
2. Process Data	2.1 Data is collected and correlated as per prescribed <i>method</i> . 2.2 Relevant data is used as references in accordance with the objectives of the program. 2.3 Information is applied according to workplace requirements.
3. Analyze, interpret and organize information	3.1 Collected information is analyzed, interpret and organize as required for workplace. 3.2 Collected information is interpreted and organized as required for workplace.
4. Apply and present workplace information	4.1 Findings and recommendations are summarized and presented in a user-friendly manner. 4.2 Draft report / <i>forms</i> are prepared based on standard format. 4.3 Graphs and other visual presentations are prepared to highlight <i>analysis</i> / interpretation of information. 4.4 Reports / forms are submitted and distributed to relevant departments / persons.

Range of Variables	
Variables	Range (may include but not limited to):
1. Sources of information	1.1 Daily job instructions 1.2 Specifications 1.3 Standard operating procedures 1.4 Charts 1.5 Lists 1.6 Documents 1.7 Computer data 1.8 Drawings 1.9 Sketches 1.10 Tables 1.11 Technical manuals and / or charts 1.12 Surveys 1.13 Interviews 1.14 Front-end analysis 1.15 Functional analysis
2. Methodologies	2.1 Qualitative 2.2 Quantitative
3. Forms	3.1 Questionnaires 3.2 Profile 3.3 Accident / incident report form 3.4 Work order 3.5 Purchase order
4. Analysis	4.1 Average (mean, median, mode) 4.2 Percentage 4.3 Frequency distribution
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. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 communicated and delivered current information in an interactive work environment as per workplace standard.
2. Underpinning knowledge	2.1 Identify information. 2.2 Identify data. 2.3 Workplace standard.
3. Underpinning skills	3.1 Collecting information. 3.2 Collecting data. 3.3 Demonstrating, interpreting and / or following data sheet or instruction.

	<p>3.4 Performing task as per data sheet or instruction.</p> <p>3.5 Keeping records and reports.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communicate with peers and seniors at workplace.</p>
5. Resource implications	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials consumable needed to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Demonstrate Work Values
Unit Code	GN3006A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to demonstrate work values. It includes defining the purpose of work, applying work values / ethics, dealing with ethical problems and maintaining integrity of conduct in the workplace.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the range of variables
1. Define the purpose of work	1.1 One's unique sense of purpose for working and the why's of work are identified, reflected on and clearly defined for one's development as a person and as a member of society. 1.2 Personal mission is in harmony with company's values are defined.
2. Apply work values / ethics	2.1 <i>Work values / ethics / concepts</i> are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines. 2.2 <i>Work practices</i> are undertaken in compliance with industry work ethical standards, organizational policy and guidelines. 2.3 Personal behavior and relationships with co-workers are maintained as per standards, policy and guidelines. 2.4 <i>Company resources</i> are used in accordance with transparent company ethical standard, policies and guidelines.
3. Deal with ethical problems	3.1 Company ethical standard, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines. 3.2 Work <i>incidents / situations</i> are reported and/or resolved in accordance with company protocol /

	<p>guidelines.</p> <p>3.3 Resolution and / or referral of ethical problems identified are used as learning opportunities.</p>
4. Maintain integrity of conduct in the workplace	<p>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</p> <p>4.2 Instructions to co-workers are provided based on ethical, lawful and reasonable directives.</p> <p>4.3 Company values / practices are shares with co-workers using appropriate behavior and language.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Work values / ethics / concepts	<p>1.1 Commitment / Dedication</p> <p>1.2 Sense of urgency</p> <p>1.3 Sense of purpose</p> <p>1.4 Love for work</p> <p>1.5 High motivation</p> <p>1.6 Orderliness</p> <p>1.7 Reliability</p> <p>1.8 Competence</p> <p>1.9 Dependability</p> <p>1.10 Goal-oriented</p> <p>1.11 Sense of responsibility</p> <p>1.12 Being knowledgeable</p> <p>1.13 Loyalty to work / company</p> <p>1.14 Sensitivity to others</p> <p>1.15 Compassion / Caring attitude</p> <p>1.16 Balancing between family and work</p> <p>1.17 Benjamin spirit / teamwork</p> <p>1.18 Sense of nationalism</p> <p>1.19 Gender awareness</p>
2. Work practices	<p>2.1 Quality of work</p> <p>2.2 Punctuality</p> <p>2.3 Efficiency</p> <p>2.4 Effectiveness</p> <p>2.5 Productivity</p> <p>2.6 Resourcefulness</p> <p>2.7 Innovativeness / Creativity</p> <p>2.8 Cost consciousness</p> <p>2.9 5S</p> <p>2.10 Attention to details</p>

3. Company resources	3.1 Consumable materials 3.2 Equipment / Machineries 3.3 Human 3.4 Time 3.5 Financial resources
4. Incidents / situations	4.1 Violent / intense dispute or argument 4.2 Gambling 4.3 Use of prohibited substances 4.4 Pilferages 4.5 Damage to person or property 4.6 Vandalism 4.7 Falsification 4.8 Bribery 4.9 Sexual Harassment 4.10 Blackmail
5. Instructions	5.1 Verbal 5.2 Written
<p>Evidence Guide Evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> 1.1 defined one’s unique sense of purpose for working; 1.2 clarified and affirmed work values / ethics / concepts consistently in the workplace; 1.3 demonstrated work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines; 1.4 demonstrated personal behavior and relationships with co-workers and / or clients consistent with ethical standards policy and guidelines; 1.5 used company resources in accordance with company ethical standard, policies and guidelines; 1.6 followed company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct / behavior; 1.7 demonstrated sufficient knowledge of the factors influencing negotiation to achieve agreed outcome; and 1.8 participated in negotiation with at least one person to achieve an agreed outcome.

<p>2. Underpinning knowledge</p>	<p>2.1 Occupational safety and health. 2.2 Work values and ethics. 2.3 Company performance and ethical standards. 2.4 Company policies and guidelines. 2.5 Fundamental rights at work including gender sensitivity. 2.6 Work responsibilities / job functions. 2.7 Corporate social responsibilities. 2.8 Company code of conduct / values. 2.9 Balancing work and family responsibilities. 2.10 Codes of practice and guidelines for the organization. 2.11 Organization policy and procedures for negotiations. 2.12 Decision making and conflict resolution strategies procedures. 2.13 Problem solving strategies on how to deal with unexpected questions and attitudes during negotiation.</p>
<p>3. Underpinning skills</p>	<p>3.1 Developing interpersonal skills to strengthen rapport with other parties. 3.2 Communicating with others (verbal and listening). 3.3 Self-awareness, understanding and acceptance. 3.4 Applying good manners and right conduct. 3.5 Observation skills. 3.6 Negotiation skills.</p>
<p>4. Required attitudes</p>	<p>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 to rights for peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.</p>
<p>5. Resources implication</p>	<p>The following resources must be provided: 5.1 workplace (actual or simulated); 5.2 case studies / scenarios; 5.3 room with facilities necessary for the negotiation process; and 5.4 human resources (negotiators).</p>
<p>6. Methods of assessment</p>	<p>Methods of assessment may include but not limited to: 6.1 written test; 6.2 demonstration; 6.3 oral questioning; and 6.4 portfolio.</p>

7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified Assessor.</p>
<p>Accreditation Requirements</p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualification Framework for Bangladesh
Unit of Competency**

Unit Title	Perform Computer Operations
Unit Code	GN3008A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform computer operations. It includes preparing for task, preparing a word document, a spreadsheet document, a power point presentation and accessing information using internet service.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables
1. Prepare for task	<p>1.1 Tasks are selected as per workplace requirements.</p> <p>1.2 Hardware and software are selected according to task assigned and required outcome.</p> <p>1.3 Occupational Health and Safety (OSH) guidelines and procedures are followed as per workplace requirements.</p>
2. Prepare a Word Document	<p>2.1 Data are entered into computer in accordance with requirements.</p> <p>2.2 Information is checked and saved in accordance with standard operating procedures.</p> <p>2.3 Data are stored in storage media according to requirements.</p> <p>2.4 Documents are printed as per requirements.</p> <p>2.5 Work is performed within ergonomic guidelines.</p>
3. Prepare a Spreadsheet document	<p>3.1 Spreadsheet data are entered into computer in accordance with requirements.</p> <p>3.2 Information is checked and saved in accordance with standard operating procedures.</p> <p>3.3 Data are stored in storage media according to requirements.</p> <p>3.4 Documents are printed as per requirements.</p> <p>3.5 Work is performed within ergonomic guidelines.</p>

4. Prepare a power point presentation	<p>4.1 Data are entered using power point.</p> <p>4.2 Entered data are checked and saved.</p> <p>4.3 Power point is used in accordance with workplace requirements.</p> <p>4.4 Power point documents are printed as per requirements.</p>
5. Access information using internet service	<p>5.1 Application containing information required is accessed according to workplace procedures.</p> <p>5.2 Data are accessed and downloaded using the internet service.</p> <p>5.3 Data are stored in storage media according to requirements.</p> <p>5.4 Data are printed as per workplace requirements.</p> <p>5.5 Communications through email are performed.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Task	<p>1.1 Word processing (type, save and print document including simple tables)</p> <p>1.2 Spread sheets (payroll, requisition and inventory)</p> <p>1.3 Internet access</p> <p>1.4 Power Point Presentation (Word, inserting symbols)</p>
2. Hardware	<p>2.1 Personal computers</p> <p>2.2 Networked systems</p> <p>2.3 Communication equipment</p> <p>2.4 Printers</p> <p>2.5 Scanners</p> <p>2.6 Keyboard</p> <p>2.7 Mouse</p>
3. Software	<p>3.1 Word processing packages</p> <p>3.2 Data base packages</p> <p>3.3 Internet</p> <p>3.4 Spreadsheets</p>
4. OSH guidelines	<p>4.1 OSH guidelines</p> <p>4.2 Workplace procedures</p>
5. Storage media	<p>5.1 CDs</p> <p>5.2 Zip disks</p> <p>5.3 Hard disk drives, local and remote</p>

6. Ergonomic guidelines	6.1 Types of equipment used 6.2 Appropriate furniture 6.3 Sitting posture 6.4 Lifting posture 6.5 Visual display unit screen brightness
Evidence Guide Evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of Unit of Competency.	
1. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 selected and used hardware components according to the task requirement; 1.2 identified and explained the functions of both hardware and software used, their general features and capabilities; 1.3 produced accurate and complete data in accordance with the requirements; and 1.4 used appropriate devices and procedures to transfer files / data accurately.
2. Underpinning knowledge	2.1 Basic ergonomics of keyboard and computer use. 2.2 Main types of computers and basic features of different operating systems. 2.3 Main parts of a computer. 2.4 Software and hardware. 2.5 OSH principles and responsibilities. 2.6 Computer peripherals.
3. Underpinning skills	3.1 Reading skills required to interpret work instruction. 3.2 Preparing a Spreadsheet document. 3.3 Preparing a power point presentation. 3.4 Using the internet download information. 3.5 Communicating through e-mail.
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.
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated); 5.2 computer hardware, facilities and relevant accessories of the computer; and 5.3 materials consumables to perform activities.

6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Lead Small Team
Unit Code	GN3010A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to lead small team. It includes providing team leadership, assigning responsibilities, setting performance expectations for team members and supervising team performance.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables
1. Provide team leadership	<p>1.1 <i>Work requirements</i> are identified and presented to team members.</p> <p>1.2 Reasons for instructions and requirements are communicated to team members.</p> <p>1.3 <i>Team members' queries and concerns</i> are recognized, discussed and dealt with team members.</p>
2. Assign responsibilities	<p>2.1 Duties, and responsibilities are allocated having regard to the skills, knowledge and attitudes required to properly undertake the assigned task.</p> <p>2.2 Duties are allocated having regard to individual preference, domestic and personal considerations, whenever possible.</p>
3. Set performance expectations for team members	<p>3.1 Performance expectations are established based on client needs and according to assignment requirements.</p> <p>3.2 Performance expectations are based on individual team members' duties and area of responsibility.</p> <p>3.3 Performance expectations are discussed and directed to implement in the workplace.</p>
4. Supervise team performance	<p>4.1 <i>Monitoring of performance</i> are taken place against defined performance criteria and / or assignment instructions and corrective action taken if required.</p> <p>4.2 Team members are provided <i>feedback</i>, positive support and advice on strategies to overcome any deficiencies.</p> <p>4.3 <i>Performance issues</i> which cannot be rectified or</p>

	<p>addressed within the team are referenced to appropriate personnel.</p> <p>4.4 Team members are kept informed of any changes in the priority allocated to assignments or tasks which might impact on clients' / customers' needs and satisfaction.</p> <p>4.5 Team operations are monitored to ensure that employer / client needs and requirements are met.</p> <p>4.6 Follow-up communication is provided on all issues affecting the team.</p> <p>4.7 All relevant documentation is completed.</p>
Range of Variables	
Variable	Range (may include but are not limited to):
1. Work requirements	1.1 Client Profile 1.2 Assignment instructions
2. Team member's queries and concerns	2.1 Roster 2.2 Shift details
3. Monitoring of performance	3.1 Formal process 3.2 Informal process
4. Feedback	4.1 Formal process 4.2 Informal process 4.3 Sandwich process
5. Performance issues	5.1 Work output 5.2 Work quality 5.3 Team participation 5.4 Compliance with workplace protocols 5.5 Safety 5.6 Customer service
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. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <p>1.1 maintained or improved individuals and / or team performance given a variety of possible scenario;</p> <p>1.2 assessed and monitored team and individual performance against set criteria;</p> <p>1.3 represented concerns of a team and individual to next level of management or appropriate specialist and to negotiate on their behalf;</p> <p>1.4 allocated duties and responsibilities, having regard to individual's knowledge, skills and aptitude and the needs</p>

	<p>of the tasks to be performed; and</p> <p>1.5 set and communicated performance expectations for a range of tasks and duties within the team and provided feedback to team members.</p>
2. Underpinning knowledge	<p>2.1 Company policies and procedures.</p> <p>2.2 Relevant legal requirements.</p> <p>2.3 How performance expectations are set.</p> <p>2.4 Methods of monitoring performance.</p> <p>2.5 Client expectations.</p> <p>2.6 Team members' duties and responsibilities.</p>
3. Underpinning skills	<p>3.1 Counselling informal performance skills.</p> <p>3.2 Building team skills.</p> <p>3.3 Negotiating skills.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Communicate with peers and seniors at workplace.</p> <p>4.8 Respect to rights of peers and seniors at workplace.</p>
5. Resource implications	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and facilities appropriate to processes or activity;</p> <p>5.3 materials relevant to the proposed activity;</p> <p>5.4 equipment and outfits appropriate in applying safety measures; and</p> <p>5.5 relevant drawings, manuals, codes, standards and reference material.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>

7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
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Accreditation Requirements

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The Sector Specific Competencies

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Work in the Ceramic Industry
Unit Code	CERSS1001A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to work in the ceramic industry. It includes identifying job roles and responsibilities and observing OSH, planning work activities and working with others.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <i>Bold & italicized</i> terms are elaborated in the Range of Variables
1. Identify job roles and responsibilities	1.1 Job roles and responsibilities are identified. 1.2 Relationships within the ceramic industry employees are identified.
2. Identify and observe OSH	2.1 <i>Occupational Safety and Health (OSH)</i> is identified and observed. 2.2 Safe work practices are followed when using equipment in the work environment. 2.3 <i>Hazards</i> related to workplace are identified.
3. Plan work activities	3.1 Common goals, objectives and tasks are identified and clarified with appropriate persons. 3.2 Individual tasks are determined and agreed on in accordance with workplace environment.
4. Work with others	4.1 <i>Effective interpersonal skills</i> are applied to interact with others and to contribute to activities and objectives. 4.2 Assigned tasks are performed in accordance with job requirements, specifications and workplace environment. 4.3 Work requirements are confirmed with colleagues.
Range of Variables	
Variable	Range (may include but not limited to):

1. Occupational Safety and Health (OSH)	<ul style="list-style-type: none"> 1.1 Apron 1.2 Hair net / Cap 1.3 Hand gloves 1.4 Goggles 1.5 Safety shoes 1.6 Mask 1.7 Ear-protector
2. Hazards	<ul style="list-style-type: none"> 2.1 Mechanical hazards 2.2 Electrical hazards 2.3 Fire hazard 2.4 Chemical hazard 2.5 Sound hazard 2.6 Environmental hazard and other workplace hazards
3. Effective interpersonal skills	<ul style="list-style-type: none"> 3.1 Basic listening and speaking skills 3.2 Use of terminology and jargon 3.3 Communicating and receiving feedback 3.4 Interpretation of instructions, and 3.5 Basic principles of effective communication
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 identified job roles and responsibilities; and 1.2 demonstrated working in the ceramic industry.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Safety rules and procedure. 2.2 Safety requirements in handling tools. 2.3 Working with others.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Reading skills required to interpret work instruction and numerical skills. 3.2 Communicating skills. 3.3 Problem solving in emergency situation.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Environmental concerns. 4.5 Eagerness to learn. 4.6 Tidiness and timeliness. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.

5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials and consumables needed to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Use Measuring Tools and Equipment
Unit Code	CERSS1002A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use measuring tools and equipment. It includes selecting measuring instruments, carrying out measurements and calculation and maintaining measuring instruments.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Select measuring instruments	1.1 Object or component to be measured is identified. 1.2 Correct specifications are obtained from relevant source. 1.3 Required <i>measuring instrument</i> is selected in accordance with job requirements.
2. Carry out measurements and calculation	2.1 Accurate measurements are obtained in accordance with job requirement. 2.2 <i>Basic calculation</i> is needed to complete for performed work tasks. 2.3 Calculations involving fractions, percentages and mixed numbers are used to complete workplace tasks. 2.4 Numerical calculation is checked and corrected for accuracy in accordance with job requirement. 2.5 Instruments are read according to the limit of accuracy of the tool.
3. Maintain measuring instruments	3.1 Measuring instruments are checked for damage prior to storage. 3.2 Measuring instruments are cleaned before and after using.
Range of Variables	
Variable	Range (may include but not limited to):

1. Measuring instruments	<ul style="list-style-type: none"> 1.1 Measuring tape 1.2 Calipers (inside-outside) 1.3 Thickness gauge 1.4 Torque gauge 1.5 Small hole gauge 1.6 Try square 1.7 Protractor 1.8 Combination gauge 1.9 Steel rule
2. Basic calculation	<ul style="list-style-type: none"> 2.1 Volume 2.2 Area 2.3 Displacement 2.4 Inside diameter 2.5 Circumference 2.6 Radius 2.7 Length 2.8 Thickness 2.9 Outside diameter 2.10 Taper 2.11 Out of roundness
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 selected measuring instruments 1.2 carried-out measurements and calculations 1.3 maintained measuring instruments.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Types of measurments. 2.2 Types of measuring instruments and its use. 2.3 Formula for volume, area, perimeter and other geometric figures.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Caring and handling measuring instruments. 3.2 Calibrating and using measuring instruments. 3.3 Performing calculation by addition, subtraction, multiplication and division. 3.4 Visualizing objects and shapes. 3.5 Interpreting formula for volume, area, perimeter and other geometric figures.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities.

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

Accreditation Requirements

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**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Handle Dangerous Goods / Hazardous Substances
Unit Code	CERSS2003A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to handle dangerous goods / hazardous substances. It includes identifying requirements for working with dangerous good and / or hazardous substances, confirming site incident procedures and selecting handling techniques.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Identify requirements for working with dangerous goods and / or hazardous substances	<p>1.1 <i>Hazards</i> usually found in ceramic industries are identified.</p> <p>1.2 Dangerous goods and / or hazardous substances are identified from information including class labels, manifests and other documentation.</p> <p>1.3 <i>Storage requirements</i> for hazardous substances and / or dangerous goods are identified and applied.</p> <p>1.4 Legislative requirements for hazardous substances and / or dangerous goods are known and used to plan work activities.</p> <p>1.5 Handling procedures for different classes and characteristics of goods are observed.</p> <p>1.6 Confirmation is sought from relevant personnel where dangerous goods or hazardous materials do not appear to be appropriately marked.</p>
2. Confirm site incident procedures	<p>2.1 Incident reporting processes are identified.</p> <p>2.2 Emergency procedures are identified and confirmed.</p>
3. Select handling techniques	<p>3.1 Load handling and shifting procedures are selected in accordance with identified requirements for particular goods.</p> <p>3.2 <i>Environmental issues</i> and concerns are practiced following workplace requirements.</p>
Range of Variables	

Variable	Range (may include but not limited to):
1. Hazards	1.1 Hazardous or dangerous materials 1.2 Contamination of or from materials 1.3 Noise 1.4 Light 1.5 Energy sources
2. Storage requirement	2.1 Short term storage 2.2 Long term storage 2.3 In transit
3. Environmental issues	3.1 Use of hazardous material 3.2 Waste disposal 3.3 Use of chemical related to furniture sector
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. Critical aspects of competency	Assessment required evidences that the candidate: <ol style="list-style-type: none"> 1.1 identified dangerous goods / hazardous substances (from labels, IMDG markings, HAZCHEM signs and other relevant identification criteria) 1.2 stated legislative requirements for hazardous substances 1.3 identified and selected the safety requirements for handling dangerous goods / hazardous substances 1.4 maintained workplace records and documentation.
2. Underpinning knowledge	<ol style="list-style-type: none"> 2.1 Safety procedure for handling dangerous goods. 2.2 Safety requirements in handling hazardous chemicals. 2.3 Working with others. 2.4 Dangerous goods and / or hazardous substances and its handling process.
3. Underpinning skills	<ol style="list-style-type: none"> 3.1 Reading skills required to interpret work instruction and numerical skills. 3.2 Communication skills. 3.3 Problem solving in emergency situation.

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 Environmental concerns. 4.5 Eagerness to learn. 4.6 Tidiness and timeliness. 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 a training centre or in an actual or simulated workplace after completion of the training module. 7.2 Assessment should be done by a BTEB certified assessor.
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Participate in Environmentally Sustainable Work Practices
Unit Code	CERSS3004A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to participate in environmentally sustainable work practices. It includes identifying environmental practices for ceramic sector, collaborating with co-workers and performing environmental awareness related to wood works.
Nominal Hours	25 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Identify environmental practices for ceramic sector	1.1 Environmental practices in ceramic industry is identified. 1.2 Environmental practices for ceramic industry are practiced.
2. Collaborate with co-workers	2.1 <i>Collaborative actions</i> and attitudes related to sustainable environmental practices are identified. 2.2 Collaborating with co-workers to deliver desired output is practiced as per industry requirements.
3. Perform environmental awareness related to wood works	3.1 <i>Environmental issues</i> and concerns are identified and discussed. 3.2 Environmental issues and concerns are practiced following workplace requirements.
Range of Variables	
Variable	Range (may include but not limited to):
1. Collaborative actions	1.1 Working with others 1.2 Understanding others 1.3 Workmanship
2. Environmental issues	2.1 Use of timber, hazardous materials 2.2 Waste disposal 2.3 Use of chemical related to furniture sector

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. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <p>1.1 demonstrated work values related to environmental sustainable practices</p> <p>1.2 identified environmental issues.</p>
2. Underpinning knowledge	<p>2.1 Safety requirements in the workplace.</p> <p>2.2 Working with others.</p> <p>2.3 Environmental issues and concerns.</p> <p>2.4 Collaborative actions.</p>
3. Underpinning skills	<p>3.1 Reading skills required to interpret work instruction and numerical skills.</p> <p>3.2 Collaborating with co-workers.</p> <p>3.3 Problem solving in emergency situation.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Environmental concerns.</p> <p>4.5 Eagerness to learn.</p> <p>4.6 Tidiness and timeliness.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated)</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities</p> <p>5.3 materials and consumables needed to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test</p> <p>6.2 demonstration</p> <p>6.3 oral questioning</p> <p>6.4 portfolio.</p>

7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
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Accreditation Requirements

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**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Read and Interpret Work Documents
Unit Code	CERSS3005A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to read and interpret work documents. It includes identifying and accessing specification manuals, interpreting manual, performing work activities stated in the manual and storing manuals.
Nominal Hours	25 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Identify and access specification manuals	1.1 Specific manuals are identified and accessed as per job requirements. 1.2 Version and date of manual are checked to ensure that correct specification and procedures are identified.
2. Interpret manual	2.1 Relevant sections, chapters of specifications / manuals are located in relation to the work to be conducted. 2.2 Information and procedure in the manual are interpreted in accordance with industry practices.
3. Perform work activities stated in the manual	3.1 <i>Manual</i> is interpreted according to job requirements. 3.2 Work steps are correctly identified in accordance with manufacturer's specification. 3.3 Manual data are applied according to the given task. 3.4 All correct sequencing and adjustments are interpreted in accordance with information contained on the manual or specifications.
4. Store manuals	4.1 Manual or specification is stored appropriately to prevent damage, ready access and updating of information when required in accordance with company requirements.
Range of Variables	

Variable	Range (may include but not limited to):
1. Manuals	1.1 Manufacturer's specification manual 1.2 Repair manual 1.3 Maintenance procedure manual 1.4 Periodic maintenance manual
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. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 identified and accessed specification/manuals as per job requirements 1.2 interpreted manuals in accordance with industry practices 1.3 applied information in manuals according to the given task 1.4 stored manuals in accordance with company requirements.
2. Underpinning knowledge	2.1 Manuals used in ceramic sector. 2.2 Identification of symbols used in the manuals. 2.3 Identification of units of measurements. 2.4 Unit conversion.
3. Underpinning skills	3.1 Reading skills required to interpret work instruction and numerical skills 3.2 Interpreting manual 3.3 Problem solving skills in emergency situation.
4. Required attitudes	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 required manuals and physical facilities appropriate to perform activities 5.3 materials and consumables needed to perform activities.

6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

The Occupational Specific Competencies

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Prepare Raw Materials
Unit Code	CERBGP1001A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare raw materials. It includes following OSH practices, selecting raw materials, washing stone materials and clay materials, storing materials and cleaning and maintaining tools, equipment and work area.
Nominal Hours	70 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Select raw materials	<p>2.1 <i>Raw materials</i> are identified as per specification.</p> <p>2.2 Raw materials are sorted and separated impurities as per job requirement.</p> <p>2.3 Impure materials are removed according to workplace procedure.</p>
3. Wash stone materials	<p>3.1 <i>Tools and equipment</i> are selected and collected as per job requirement.</p> <p>3.2 <i>Materials</i> are loaded into tank / washing yard as required.</p> <p>3.3 Water is supplied in the tank / washing yard as per required.</p> <p>3.4 Stone is washed by brush as required.</p> <p>3.5 Impurities are separated using hammer and magnet as required.</p> <p>3.6 Pure materials and impurities are put to the designated places as per company procedures.</p> <p>3.7 Log book is written and reported to designated person.</p>

4. Wash clay materials	<p>4.1 Tools are selected and collected as per job requirement.</p> <p>4.2 Materials are loaded into tank / washing yard as required.</p> <p>4.3 Water is supplied in the tank / washing yard as per required.</p> <p>4.4 Clay materials are put into blungers required.</p> <p>4.5 Clay materials are mixed as per job requirement.</p> <p>4.6 Impurities and floating materials are separated using sieve and magnet as required.</p> <p>4.7 Pure materials and impurities are put to the designated places as per company procedures.</p> <p>4.8 Log book is written and reported to designated person.</p>
5. Store materials	<p>5.1 Materials are tagged according to name and size.</p> <p>5.2 Materials are stored in the designated place as per enterprise procedure.</p> <p>5.3 Storage of materials are handled following material safety data sheet (MSDS).</p>
6. Clean and maintain tools, equipment and work area	<p>6.1 Workplace documentation, including stock usage, are completed in accordance with workplace procedures.</p> <p>6.2 Faulty and defective equipment is tagged and reported in accordance with workplace procedures.</p> <p>6.3 Waste materials are removed in accordance with workplace standards.</p> <p>6.4 Tools are cleaned, maintained and stored as per workplace procedures.</p> <p>6.5 Work area is cleaned and waste removed following</p> <p>6.6 workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Safety glasses / goggles</p> <p>1.2 Mask</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear</p> <p>1.6 Protective clothing</p> <p>1.7 Helmet</p>
2. Raw materials	<p>2.1 Feldspar</p> <p>2.2 Quartz</p> <p>2.3 Lime stone</p> <p>2.4 China clay</p> <p>2.5 Ball clay</p> <p>2.6 Dolomite</p>

	<ul style="list-style-type: none"> 2.7 Zinc Oxide 2.8 Sodium silicate 2.9 Zirconium silicate 2.10 Talc
3. Tools and equipment	<ul style="list-style-type: none"> 3.1 Fork lift truck 3.2 Front end loader 3.3 Hammer 3.4 Magnet 3.5 Hose pipe 3.6 Washing yard for stone 3.7 Washing yard for clay 3.8 Blunger 3.9 Steel Brush 3.10 Trolley 3.11 Bucket 3.12 Pan 3.13 Sieve 3.14 Balcha
4. Materials	<ul style="list-style-type: none"> 4.1 Body materials 4.2 Glaze materials
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. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 identified and selected raw materials correctly; 1.2 washed raw materials; and 1.3 identified impurities.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Material variations 2.2 Types of impurities 2.3 Features of impurities 2.4 Process of remove impurities 2.5 Mixing procedure 2.6 Washing procedure 2.7 Sieving procedure 2.8 Materials handling procedure 2.9 Store process
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Sorting and separating impurities 3.2 Washing stone 3.3 Brushing stone 3.4 Using hammer 3.5 Mixing clay 3.6 Sieving clay 3.7 Storing technique

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.
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated); 5.2 tools and physical facilities appropriate to perform activities; and 5.3 materials 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; and 6.4 portfolio.
7. Contexts of assessment	7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module. 7.2 Assessment should be done by a BTEB certified assessor.
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Perform Crushing of Stone Materials
Unit Code	CERBGP1002A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform crushing of stone materials. It includes following OSH, preparing crushing machine, operating machine, distributing crushed product and cleaning and maintaining equipment and work area.
Nominal Hours	90 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare crushing machine	<p>2.1 Hazards and danger are checked for <i>machine</i>.</p> <p>2.2 Faults are identified and isolated with tags in accordance with standard operating procedures.</p> <p>2.3 All doors and guards are checked to ensure the secure position.</p> <p>2.4 Equipment settings are adjusted to ensure conformance with standard operating procedures.</p> <p>2.5 Electrical panel board is checked.</p> <p>2.6 Pre-start is conducted as required.</p> <p>2.7 Appropriate personnel are notified before start machine.</p> <p>2.8 Adequate supply of <i>materials</i> is ensured to meet production requirements with standard operating procedure.</p>
3. Operate machine	<p>3.1 Machine is started in sequence with standard operating procedures.</p> <p>3.2 Instrument / control panels are monitored and</p>

	<p>adjusted as necessary to remain within specified operating parameters.</p> <p>3.3 Product throughput is maximized and efficiency to maintained target parameters.</p> <p>3.4 Jaw and roller are adjusted as per requirement of the output materials size.</p> <p>3.5 Oversize materials are re-crushed as per requirement.</p> <p>3.6 Faults are identified that can occur during the operation and rectified by work instructions.</p> <p>3.7 Causes of machine failure is identified and rectified as work instructions.</p> <p>3.8 Records and log books of machine operations are maintained.</p> <p>3.9 Non-routine problems are identified and reported to designated person.</p>
4. Distribute crushed product	<p>4.1 Crushed materials are distributed to the correct silo / storage area.</p> <p>4.2 Silo / storage areas are monitored to ensure compliance with enterprise storage quality and quantity requirements.</p>
5. Clean and maintain equipment and work area	<p>5.1 Work area, hand and/or power tools and equipment are cleaned, maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty and / or defective equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposed following workplace procedures.</p> <p>5.5 Waste materials are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Safety glasses / goggles</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p> <p>1.6 Mask</p> <p>1.7 Helmet</p>
2. Machine	<p>2.1 Jaw crusher</p> <p>2.2 Roller crusher</p> <p>2.3 Gyratory crusher</p> <p>2.4 Hammer mill</p>

3. Materials	3.1 Quartz 3.2 Feldspar 3.3 Limestone 3.4 Dolomite
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. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 adjusted jaw and roller as per requirement of the output materials size; 1.2 feed and distributed materials; and 1.3 followed signage, tags and isolation procedures.
2. Underpinning knowledge	2.1 Appropriate safety procedures concerning the operation of the equipment. 2.2 Procedures relating to the reporting of hazardous conditions. 2.3 Understand machine faults. 2.4 Start and shut down procedures. 2.5 Principles of crushing. 2.6 Mesh size of materials. 2.7 Basic maintenance procedure of the machine.
3. Underpinning skills	3.1 Operating machine. 3.2 Adjusting jaw and roller. 3.3 Adjusting sieve. 3.4 Adjusting conveyer. 3.5 Re-crushing oversize materials. 3.6 Cleaning and maintaining tools and equipment.
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.
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; and 5.3 materials, consumables to perform activities.

6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Perform Grinding of Crushed Materials
Unit Code	CERBGP1003A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform grinding of crushed materials. It includes following OSH practices, preparing to grind machine, loading materials, grinding materials, distributing ground product and cleaning and maintaining equipment and work area.
Nominal Hours	90 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare to grind machine	<p>2.1 Hazards and danger are checked for <i>machine</i>.</p> <p>2.2 Faults are identified and isolated with tags in accordance with standard operating procedures.</p> <p>2.3 All doors and guards are checked to ensure the secure position.</p> <p>2.4 Equipment settings are adjusted to ensure conformance with standard operating procedures</p> <p>2.5 Electrical panel board is checked.</p> <p>2.6 Lining block of Grinding machine is checked.</p>
3. Load materials	<p>3.1 Crushed materials are weighted as per specification.</p> <p>3.2 <i>Grinding media</i> are used as per requirement.</p> <p>3.3 Water and deflocculants are added in milling machine as per requirement.</p> <p>3.4 Pre-start is conducted as required.</p> <p>3.5 Appropriate personnel are notified before start</p>

	<p>machine.</p> <p>3.6 Adequate supply of materials is ensured to meet production requirements with standard operating procedure.</p>
4. Grind materials	<p>4.1 Machine is started in sequence with standard operating procedures.</p> <p>4.2 Physical inspections of equipment are made at specified.</p> <p>4.3 Intervals to identify any anomalies.</p> <p>4.4 Output materials throughput are maximized and efficiency to maintain target parameters.</p> <p>4.5 Cone / roller is adjusted as per requirement of the output materials size.</p> <p>4.6 Machine faults are identified that can occur during the operation and rectified fault causes in accordance with procedures.</p> <p>4.7 Records and log books of machine operations are maintained to meet the work instructions.</p> <p>4.8 Non-routine problems are identified and reported to designated person in line with enterprise requirements.</p>
5. Distribute ground product	<p>5.1 Ground materials are distributed to their correct silo / storage area in accordance with instruction.</p> <p>5.2 Silo / storage areas are monitored to ensure compliance with enterprise storage quality and quantity requirements.</p>
6. Clean and maintain equipment and work area	<p>6.1 Work area, hand and/or power tools and equipment are cleaned, maintained in accordance with workplace procedures.</p> <p>6.2 Machine is cleaned and kept in a safe mode.</p> <p>6.3 Faulty and / or defective equipment is tagged and reported in accordance with workplace practices.</p> <p>6.4 Unused materials are collected and stored for re-use or disposed following workplace procedures.</p> <p>6.5 Waste materials are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Safety glasses / goggles</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p> <p>1.6 Mask</p>

	1.7 Helmet
2. Machine	2.1 Cone crusher 2.2 Edge mill 2.3 Roller mill 2.4 Pan mill 2.5 Rotary mill
3. Grinding media	3.1 Ball stone 3.2 Alumina pebble 3.3 Flint stone
4. Materials	4.1 Quartz 4.2 Feldspar 4.3 Limestone
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. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 adjusted machine settings to ensure conformance with standard operating procedures; 1.2 started machine in sequence with standard operating procedures; 1.3 identified and rectified machine failure causes are in accordance with procedures / work instructions; 1.4 distributed materials are feed; and 1.5 carried out inspection practices.
2. Underpinning knowledge	2.1 Appropriate safety procedures concerning the operation of the machine. 2.2 Procedures relating to the reporting of hazardous conditions. 2.3 Start and shut down procedures. 2.4 RPM of a grinding machine. 2.5 Principles of grinding. 2.6 Materials properties. 2.7 Procedure of charging or loading materials. 2.8 Types of materials to be ground and their additives. 2.9 Basic maintenance and inspection practices carry out.
3. Underpinning skills	3.1 Operating machine. 3.2 Adjusting cone / roller 3.3 Identifying and rectifying machine failure causes. 3.4 Maintaining records and log books of machine operations. 3.5 Distributing ground materials to their correct silo/storage area.

	3.6 Maintaining tools, equipment and store.
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.
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; and 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; and 6.4 portfolio.
7. Contexts of assessment	7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module. 7.2 Assessment should be done by a BTEB certified assessor.

Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Charge Ball Mill
Unit Code	CERBGP2004A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to charge ball mill. It includes following OSH practices, preparing ball mill, operating ball mill, monitoring operation and rectifying problems and cleaning and cleaning and maintaining tools, equipment and work area.
Nominal Hours	90 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty <i>tools</i> are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Equipment (OSH) instructions are followed according to job specification.</p>
2. Prepare ball mill	<p>2.1 Work schedule are checked as per instruction.</p> <p>2.2 Requirements are identified and set <i>parameters</i> in accordance with standard procedures.</p> <p>2.3 Correct type and quantity of materials are selected.</p> <p>2.4 All special requirements and specifications are meet.</p> <p>2.5 Any material handling problems are identified and taken action in accordance with standard procedures.</p> <p>2.6 Material records are updated as appropriate.</p>
3. Operate ball mill	<p>3.1 <i>Materials</i> are feed as per composition requirement.</p> <p>3.2 Ball mill feeding mouth is closed as per operating manuals.</p> <p>3.3 Milling time is set in accordance with job requirement.</p> <p>3.4 Ball mill is set up and started as per standard operating procedures.</p> <p>3.5 After complete the milling ball mill mouth nut is loosen for removing air from ball mill follow safety requirement.</p>

	<p>3.6 Ball mill mouth is opened after remove air and perform test as required.</p> <p>3.7 Slip is unloaded from ball mill and preserved underground blunger.</p>
4. Monitor operation and rectify problems	<p>4.1 Equipment performance are monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Machine is adjusted and controlled to ensure correct body quality.</p> <p>4.3 The range of faults are identified and rectified fault causes that can occur during the operation in accordance with work instructions.</p> <p>4.4 Non-routine problems are identified and report to designated person.</p> <p>4.5 Records and log books of machine are completed and maintained as per enterprise procedure.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area is cleaned; hand and / or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are dealt with following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Tools	<p>1.1 Balance / Scale</p> <p>1.2 Trolley</p> <p>1.3 Lift</p> <p>1.4 Conveyer belt</p> <p>1.5 Balcha</p> <p>1.6 Pipe</p> <p>1.7 Water flow meter</p> <p>1.8 Compressed air</p> <p>1.9 Viscometer</p> <p>1.10 Picnometer</p> <p>1.11 Sieve net</p>
2. Personal Protective Equipment (PPE)	<p>2.1 Mask</p> <p>2.2 Hair nets</p> <p>2.3 Ear muffs / plugs</p> <p>2.4 Gloves</p>

	2.5 Footwear and protective clothing 2.6 Helmet
3. Parameters	3.1 Milling time 3.2 Partial size / Residue 3.3 Density 3.4 Viscosity 3.5 Water ratio 3.6 Ball stone ratio 3.7 Defloccolants
4. Materials	4.1 Clay materials 4.2 Stone materials 4.3 Additive chemicals 4.4 Ball stone 4.5 Water
5. Machine	5.1 Ball mill 5.2 Tube mill 5.3 Pot mill 5.4 Rod mill
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. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 feed materials as per composition requirement; 1.2 set milling time; 1.3 monitored quality to minimize wastage; 1.4 opened ball mill mouth; and 1.5 anticipated faults and taken appropriate action.
2. Underpinning knowledge	2.1 Material handling requirements. 2.2 Manual handling techniques. 2.3 Principles of ball mill machine operation. 2.4 Impact of variations in body. 2.5 Properties of the body mixture. 2.6 Calculate the critical speed of ball mill. 2.7 Equipment limitations and impact on ball mill efficiency and effectiveness.
3. Underpinning skills	3.1 Operating machine. 3.2 Adjusting milling time. 3.3 Rectifying faults. 3.4 Preparing mixer materials. 3.5 Opening the ball mill mouth. 3.6 Maintaining tools and equipment.

4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Perform Blunging and Aging of Slip
Unit Code	CERBGP2005A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform blunging and aging of slip. It includes following OSH practices, selecting and collecting slip, preparing blunger and aging slip, monitoring operation and rectifying problems and cleaning and maintaining tools, equipment and work area.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Select and collect slip	<p>2.1 Slip is collected from ball mill as per required parameters.</p> <p>2.2 Slip is passed to blunger through vibrating sieve and magnetic ferro filter.</p> <p>2.3 Correct type and quantity of slips are selected.</p> <p>2.4 All special requirements and specifications are meet.</p> <p>2.5 Slip handling problems are identified and taken action in accordance with standard procedures.</p> <p>2.6 Records are updated as per instruction.</p>
3. Prepare blunger and aging slip	<p>3.1 Blending blunger is set up, started and operated as required.</p> <p>3.2 Slips are prepared and added to binding agent as required by specification and standard procedures.</p> <p>3.3 Slips are checked that match in accordance with the</p>

	<p>quality requirements.</p> <p>3.4 Ancillary equipment is used as required.</p> <p>3.5 Blunger is operated in accordance with established enterprise procedures.</p> <p>3.6 Slips are blended and aging is performed to obtain required results with specified period as per enterprise procedure.</p>
4. Monitor operation and rectify problems	<p>4.1 Blunger performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Blunger speed and time is adjusted and controlled to ensure product quality.</p> <p>4.3 Final inspection is completed of the blunger equipment.</p> <p>4.4 Faults are identified and rectified that can occur during the operation as per work instructions.</p> <p>4.5 Records and log books of blunger operations are maintained to meet work instructions.</p> <p>4.6 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area is cleaned; hand and / or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste slips are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p> <p>1.6 Helmet</p>
2. Slip	<p>2.1 Body slip</p> <p>2.2 Glaze slip</p>
3. Blunger	<p>3.1 High speed blunger</p> <p>3.2 Medium speed blunger</p> <p>3.3 Low speed blunger</p>

	3.4 Cylindrical blunger 3.5 Hexagonal blunger
4. Equipment	4.1 Pneumatic pump 4.2 Motor 4.3 Agitator 4.4 Belt 4.5 Air compressor 4.6 Hose pipe
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. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 adjusted and controlled blunger speed and time to ensure correct product quality; 1.2 maintained slip properties; 1.3 monitored quality to minimize wastage; 1.4 added binding agent as required; 1.5 anticipated problems and take appropriate action.
2. Underpinning knowledge	2.1 Slip transfer process. 2.2 Pump operating techniques. 2.3 Principles of slip. 2.4 Impact of variations of slip. 2.5 Impact of mixing on slip. 2.6 Blending procedure. 2.7 Enterprise production schedules.
3. Underpinning skills	3.1 Operating blunger. 3.2 Adjusting blending time. 3.3 Adjusting RPM. 3.4 Operating pump. 3.5 Adding binding agent. 3.6 Maintaining tools and equipment.
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.

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

Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Vibrate Screen
Unit Code	CERBGP2006A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to vibrate screen. It includes following OSH practices, transferring slip from blunger, operating vibrating sieve, monitoring operation and rectifying problems and cleaning and maintain tools, equipment and work area.
Nominal Hours	40 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Transfer slip from blunger	<p>2.1 <i>Slip</i> is collected from blunger.</p> <p>2.2 Slip density and viscosity is adjusted as per job requirement.</p> <p>2.3 All special requirements and specifications are meet.</p> <p>2.4 Material handling problems are identified and taken action in accordance with standard procedures.</p> <p>2.5 Material handling records are updated as required.</p>
3. Operate vibrating sieve	<p>3.1 Vibrating <i>sieve</i> is set up, started and operated as per job requirement.</p> <p>3.2 Vibrating sieve is prepared and used water as per job specification and standard procedures.</p> <p>3.3 Vibrating sieve mesh size is checked as per job specification.</p> <p>3.4 Ancillary equipment is used as required.</p> <p>3.5 Vibrating sieve is operated in accordance with established enterprise procedures.</p>

4. Monitor operation and rectify problems	<p>4.1 Vibrating sieve performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Non-conforming product specifications are monitored.</p> <p>4.3 Vibrating speed and time are adjusted and controlled to ensure slip quality</p> <p>4.4 Screen are washed periodically for removing oversize particles.</p> <p>4.5 Final inspection is completed of the vibrating sieve equipment.</p> <p>4.6 Faults are identified and rectified that can occur during the operation as per work instructions.</p> <p>4.7 Records and log books of vibrating sieve operations are maintained.</p> <p>4.8 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area, hand and / or power tools and equipment are cleaned and maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and maintained in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are handled following workplace instructions.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p> <p>1.6 Helmet</p>
2. Slip	<p>2.1 Body slip</p> <p>2.2 Casting slip</p> <p>2.3 Glaze slip</p>

3. Sieve	<ul style="list-style-type: none"> 3.1 Vibrating sieve 3.2 Grizzly sieve 3.3 Shaking sieve 3.4 Oscillating sieve
4. Equipment	<ul style="list-style-type: none"> 4.1 Pneumatic pump 4.2 Motor 4.3 Screen / Mesh 4.4 Vibration frame 4.5 Hose pipe 4.6 Climbing ring
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. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 adjusted and controlled vibrating speed for product quality; 1.2 checked sieve mesh size; 1.3 quality is monitored to minimize wastage; 1.4 identified screen / mesh damages; and 1.5 anticipated problems and taken appropriate action.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Slip transfer process. 2.2 Pump operating techniques. 2.3 Principles of vibrating speed. 2.4 Impact of variations in materials mesh size. 2.5 Changing process of the screen. 2.6 Properties of the slip. 2.7 Equipment limitations and impact on vibrating efficiency and effectiveness. 2.8 Enterprise production schedules.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Operating machine. 3.2 Adjusting vibrating speed. 3.3 Adjusting screen. 3.4 Maintaining tools and equipment. 3.5 Operating pump. 3.6 Maintaining record and log book.
4. Required attitudes	<ul style="list-style-type: none"> 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.

	<p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Use Magnetic Iron Separator
Unit Code	CERBGP3007A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use magnetic iron separator. It includes following OSH practices, preparing magnetic iron separator, operating magnetic iron separator, monitoring operation and rectifying problems and cleaning and maintaining tools, equipment and work area.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 Personal Protective Equipment (PPE) is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare magnetic iron separator	<p>2.1 Grids are checked as per operating procedure.</p> <p>2.2 Grids are washed in accordance with the requirements.</p> <p>2.3 Grids are set as per job requirement.</p> <p>2.4 Magnetic strength is checked and reported to concern person if required.</p> <p>2.5 Grids are changed as required.</p> <p>2.6 Power connection is checked and ensured the existence of power.</p> <p>2.7 Delivery tube is checked and cleaned as required to ensure extra water can released.</p>
3. Operate magnetic iron separator	<p>3.1 Magnetic iron separator is set up, started and operated as per standard operating procedure.</p> <p>3.2 Transfer of slip from vibrating sieve is observed to ensure iron separation.</p> <p>3.3 Grids are washed as required periodically.</p>

	3.4 Magnetic iron separator is operated in accordance with established enterprise procedures.
4. Monitor operation and rectify problems	<p>4.1 Magnetic iron separator performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Magnetic iron separator time is controlled to ensure slip flow.</p> <p>4.3 Final inspection is completed of the magnetic iron separator equipment.</p> <p>4.4 Faults are identified and rectified that can occur during the operation in accordance with work instructions.</p> <p>4.5 Records and log books of magnetic iron separator operations are maintained to meet work instructions.</p> <p>4.6 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area hand and / or power tools and equipment are cleaned and maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures;</p> <p>5.5 Waste materials are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear</p> <p>1.6 Protective clothing</p> <p>1.7 Helmet</p>
2. Magnetic iron separator	<p>2.1 Ferromagnetic iron separator</p> <p>2.2 Roller magnetic iron separator</p> <p>2.3 Magnetic bar iron separator</p>
3. Slips	<p>3.1 Body slip</p> <p>3.2 Casting slip</p> <p>3.3 Glaze slip</p>

4. Equipment	<ul style="list-style-type: none"> 4.1 Grid magnet 4.2 Bar magnet 4.3 Roller magnet 4.4 Motor 4.5 Hose pipe 4.6 Climbing ring
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 adjusted and controlled magnetic iron separator slip flow; 1.2 checked grid of magnetic iron separator; 1.3 washed properly time to time; 1.4 monitored quality to minimize wastage; 1.5 anticipated problems and take appropriate action.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Slip transfer process. 2.2 Pump operating techniques. 2.3 Principles of magnetic iron separator. 2.4 Changing process of the magnetic iron separator grid / bar. 2.5 Properties of the slip. 2.6 Equipment limitations and impact on magnetic iron separator efficiency and effectiveness. 2.7 Enterprise production schedules. 2.8 Principal of electromagnetic ferro filter.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Operating machine. 3.2 Adjusting magnetic iron separator grid / bar. 3.3 Operating pump. 3.4 Cleaning the grid. 3.5 Controlling slip flow.
4. Required attitudes	<ul style="list-style-type: none"> 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.

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

Accreditation Requirements

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**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Prepare Filter Cake Using Filter Press
Unit Code	CERBGP3008A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare filter cake using filter press. It includes following OSH practices, transferring body slip from secondary blunger, operating filter press machine, monitoring operation and rectifying problem and cleaning and maintaining tools, equipment and work area.
Nominal Hours	90 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Transfer body slip from secondary blunger	<p>2.1 Slip is collected from blunger as per procedure.</p> <p>2.2 Filter cloth is checked as per instruction.</p> <p>2.3 Filter cloth is set in accordance with instruction.</p> <p>2.4 Filter plate is checked, set and jammed according to job requirement.</p> <p>2.5 Pump is checked and set and ensure oil level in accordance with procedure.</p> <p>2.6 Security magnet bar is checked and washed as required.</p> <p>2.7 Special requirements and specifications are met.</p> <p>2.8 Operation records are updated as per instructions.</p>
3. Operate filter press machine	<p>3.1 <i>Filter press machine</i> is set up, started and operated as per standard operating procedure</p> <p>3.2 Slip pressure is controlled as per work procedure</p> <p>3.3 Water remove ratio is observed</p> <p>3.4 Filter plate leakage is identified and solved the</p>

	<p>leakage problem as required.</p> <p>3.5 Filter cake is unloaded as per time limit and stacked on limited height.</p> <p>3.6 Moisture is checked.</p> <p>3.7 Filter cake is covered as per instructions.</p> <p>3.8 Filter cakes are stocked and tagged with date and batch wise in designated place.</p>
4. Monitor operation and rectify problem	<p>4.1 Filter press machine performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Slip flow and pressure is adjusted and controlled of filter press machine.</p> <p>4.3 Final inspection of the filter press machine is completed.</p> <p>4.4 Faults are identified and rectified which can occur during the operation in accordance with work instructions.</p> <p>4.5 Records and log books of filter press machine operations are maintained to meet the work instructions.</p> <p>4.6 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area, hand and / or power tools and equipment are cleaned and maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p>
2. Filter press machine	<p>2.1 Resist plate type</p> <p>2.2 Distance plate type</p>

3. Equipment	<ul style="list-style-type: none"> 3.1 Pneumatic pump 3.2 Motor 3.3 Tray 3.4 Tray support 3.5 Adjust screw 3.6 Filter cloth 3.7 Filter plate 3.8 Hose pipe 3.9 Conveyor belt 3.10 Pressure gauge
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 adjusted and controlled pressure of filter press machine; 1.2 checked the leakage of filter plate and clothes; 1.3 ensured the moisture of the filter cake; 1.4 monitored quality to minimize wastage; 1.5 anticipated problems and take appropriate action.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Slip transfer process. 2.2 Pump operating techniques. 2.3 Principles of filter press machine. 2.4 Impact of variations in filter cake. 2.5 Changing process of the filter plates and clothes. 2.6 Properties of the slip. 2.7 Equipment limitations and impact on filter press efficiency and effectiveness. 2.8 Enterprise production schedules. 2.9 Filtration. 2.10 Unloading technique. 2.11 Pressure and pressure measuring technique.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Operating machine. 3.2 Adjusting filter press pressure. 3.3 Assembling security magnet bar. 3.4 Adjusting filter plates and clothes. 3.5 Setting and checking pump. 3.6 Unloading process.

4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>

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**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Perform Auguring
Unit Code	CERBGP3009A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform auguring. It includes following OSH practices, preparing auger machine, operating auger machine, monitoring operation and rectifying routine problems and cleaning and maintaining tools, equipment and work area.
Nominal Hours	80 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare auger machine	<p>2.1 Filter cake is collected as required.</p> <p>2.2 Filter cake moisture is checked as per instructions</p> <p>2.3 Die is set as per specification.</p> <p>2.4 Performance of vacuum pump is checked as per required pressure.</p> <p>2.5 Conveyor belt is checked as per instructions.</p> <p>2.6 Roll cutter table is set as required.</p>
3. Operate auger machine	<p>3.1 <i>Auger machine</i> is set up, started and operated as per standard operating procedure.</p> <p>3.2 Filter cake feeding is controlled as required.</p> <p>3.3 Roll body air and hardness is checked as per requirement.</p> <p>3.4 Roll body stiffness is checked as per job requirement.</p> <p>3.5 Roll body mode of direction is marked as per machine direction.</p> <p>3.6 Roll is cut as required size and roll body is staked as per instruction.</p>

	<p>3.7 Roll body moisture is checked and covered as per specification.</p> <p>3.8 Roll body is stocked and tagged with date and batch wise in designated place.</p>
4. Monitor operation and rectify routine problems	<p>4.1 Auger machine performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Pressure of Auger machine is adjusted and controlled.</p> <p>4.3 Inspection of the Auger machine is completed as per instruction.</p> <p>4.4 Faults are identified and rectified that can occur during the operation in accordance with work instructions.</p> <p>4.5 Records and log books of Auger machine operations are maintained to meet procedures / work instructions.</p> <p>4.6 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area hand and / or power tools and equipment are cleaned and maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty tools and equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear</p> <p>1.6 Protective clothing</p>
2. Auger machine	<p>2.1 De-airing pug mill</p> <p>2.2 Auger mill / Pug mill</p>

3. Tools and equipment	<ul style="list-style-type: none"> 3.1 Vacuum pump 3.2 Motor 3.3 Die 3.4 Roll cutter 3.5 Trolley 3.6 Conveyor belt 3.7 Moisture analyzer 3.8 Hardness tester
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate</p> <ul style="list-style-type: none"> 1.1 adjusted roll body hardness; 1.2 checked the roll body air; 1.3 ensured the moisture of the roll body; 1.4 checked stiffness of roll body; and 1.5 checked the augur machine wings.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Type of auguring machine. 2.2 Feeding process of filter cake in auger machine. 2.3 Working principles of Auger machine. 2.4 Impact of variations in auger roll. 2.5 Changing process of die. 2.6 Properties of the auger roll. 2.7 Enterprise production schedules.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Operating machine. 3.2 Adjusting auger roll hardness. 3.3 Operating vacuum pump. 3.4 Cutting roll body. 3.5 Unloading roll body. 3.6 Measuring moisture of roll body. 3.7 Measuring hardness of roll body. 3.8 Measuring stiffness of roll body. 3.9 Measuring de-airing of roll body.
4. Required attitudes	<ul style="list-style-type: none"> 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.

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

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**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Convert Slip to Granular Powder
Unit Code	CERBGP4010A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to convert slip to granular powder. It includes following OSH practices, preparing spray dryer machine, operating spray dryer machine, monitoring operation and rectifying routine problems and cleaning and maintaining tools, equipment and work area.
Nominal Hours	100 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare spray dryer machine	<p>2.1 Slip is collected from blunger as required</p> <p>2.2 The density and viscosity of slip are checked as per specification</p> <p>2.3 Slip pressure is checked and set as per job requirement.</p> <p>2.4 Filter is checked and set as per job requirement</p> <p>2.5 The nozzle and nozzle diameter is checked and set as required</p> <p>2.6 The pump is checked and set as required and ensured oil level</p> <p>2.7 Spray dryer tower is cleaned.</p> <p>2.8 Gas, air pressure and temperature is checked and set as per job requirement.</p>

<p>3. Operate spray dryer machine</p>	<p>3.1 Spray dryer machine is set up, started and operated in accordance with established enterprise procedures</p> <p>3.2 Slip pressure, dryer and tower body temperature is controlled as per instruction</p> <p>3.3 The powder, granular size and moisture is controlled as required</p> <p>3.4 The conveyer belt and silo are controlled according to job requirement.</p> <p>3.5 Vibrating sieve is controlled according to job requirement.</p> <p>3.6 Granular powder is stocked for aging in silo as per specification</p> <p>3.7 Granular powder is stocked and tagged with date and batch wise in designated place.</p> <p>3.8 Operation records are updated as per instructions.</p>
<p>4. Monitor operation and rectify routine problems</p>	<p>4.1 Spray dryer machine performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Slip flow and pressure of spray dryer machine is adjusted and controlled in accordance with as required.</p> <p>4.3 Moisture and granular size of powder is monitored as per instruction.</p> <p>4.4 Final inspection of the spray dryer machine is completed.</p> <p>4.5 Faults are identified and rectified that can occur during the operation in accordance with work instructions.</p> <p>4.6 Records and log books of spray dryer machine operations are maintained to meet work instructions.</p> <p>4.7 Non-routine problems are identified and reported to designated person.</p>
<p>5. Clean and maintain tools, equipment and work area</p>	<p>5.1 Work area, hand and / or power tools and equipment are cleaned and maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are handled following workplace procedures.</p>
<p>Range of Variables</p>	

Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	1.1 Mask 1.2 Hair nets 1.3 Ear muffs / plugs 1.4 Gloves 1.5 Footwear 1.6 Protective clothing
2. Equipment	2.1 Pump 2.2 Motor 2.3 Silo 2.4 Filter 2.5 Hose pipe 2.6 Conveyor belt 2.7 Moisture analyzer 2.8 Particle size analyzer 2.9 Viscometer 2.10 Pycono meter 2.11 Hydraulic trolley 2.12 Air tight bag 2.13 Balance 2.14 Dryer 2.15 Nozzle 2.16 Temperature controller
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. Critical aspects of competency	Assessment required evidences that the candidate: 1.1 adjusted and controlled spray dryer machine air, gas and slip pressure; 1.2 checked the filter and vibrating screen; 1.3 ensured the moisture and granular size of the powder; 1.4 checked nozzle and nozzle diameter; 1.5 controlled pump; and 1.6 checked slip flow and temperature.
2. Underpinning knowledge	2.1 Slip transfer process. 2.2 Pump operating techniques. 2.3 Principles of spray dryer machine. 2.4 Impact of variations in powder. 2.5 Changing process of the nozzle. 2.6 Properties of the slip and powder. 2.7 Equipment limitations and impact on spray dryer

	<p>machine efficiency and effectiveness.</p> <p>2.8 Properties of granular</p> <p>2.9 Slip ageing.</p>
3. Underpinning skills	<p>3.1 Operating spray dryer machine.</p> <p>3.2 Adjusting spray dryer machine slip, air and gas pressure.</p> <p>3.3 Setting nozzle.</p> <p>3.4 Adjusting temperature and moisture.</p> <p>3.5 Operating pump.</p> <p>3.6 Controlling conveyer belt and silo.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>

Accreditation Requirements

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**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Prepare Casting Slip
Unit Code	CERBGP4011A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare casting slip. It includes following OSH practices, preparing for job, blending of casting slip, monitoring operation and rectifying routine problems and cleaning and maintaining tools, equipment and work area.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare for job	<p>2.1 Filter cake is collected as required.</p> <p>2.2 High speed <i>blunger</i> is washed as per instructions.</p> <p>2.3 Water pump and agitator is checked as per work procedure.</p> <p>2.4 Water is added as per specification using hosepipe.</p> <p>2.5 Deflocculant is collected as per specification.</p> <p>2.6 Power supply unit is checked.</p>
3. Blend of casting slip	<p>3.1 High speed blunger is started and operated as per standard operating procedure.</p> <p>3.2 Amount of filter cake, deflocculant and water is identified as required.</p> <p>3.3 Filter cake moisture is measured using moisture tester.</p> <p>3.4 Filter cake, deflocculant and water is added for blending as per instruction.</p> <p>3.5 Density, viscosity and thixotropy are checked and maintained as per job requirement.</p> <p>3.6 PH is checked as job requirement.</p>

	<p>3.7 Ancillary equipment is used as required.</p> <p>3.8 Slip is blended and aging to obtain required results as per required period.</p> <p>3.9 Operation records are updated as per instructions.</p>
4. Monitor operation and rectify routine problems	<p>4.1 Blunger performance is monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Blunger speed and time is adjusted and controlled as per instruction.</p> <p>4.3 Faults are identified and rectified that can occur during the operation in accordance with procedures / work instructions.</p> <p>4.4 Records and log books of blunger operations are maintained to meet work instructions.</p> <p>4.5 Non-routine problems are identified and reported to designated person.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area, hand and / or power tools and equipment are cleaned and maintained in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are handled following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p>
2. Blunger	<p>2.1 High speed blunger</p> <p>2.2 Medium speed blunger</p> <p>2.3 Low speed blunger</p> <p>2.4 Cylindrical blunger</p> <p>2.5 Hexagonal blunger</p>
3. Equipment	<p>3.1 Pneumatic pump</p> <p>3.2 Motor</p> <p>3.3 Agitator</p>

	<ul style="list-style-type: none"> 3.4 Belt 3.5 Air compressor 3.6 Hose pipe 3.7 Balance 3.8 Visco meter 3.9 Density meter 3.10 PH meter
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. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 adjusted and controlled blunger speed and time; 1.2 added filter cake, deflocculant and water ratio; 1.3 checked water pump and agitator; 1.4 checked density, viscosity and thixotropy; and 1.5 checked pH.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Slip transfer process. 2.2 Blunger and pump operating techniques. 2.3 Principles of mixing slip. 2.4 Impact of variations in product specification of the mixing process. 2.5 Properties of the casting slip. 2.6 Properties of deflocculant. 2.7 Density, viscosity and P^H testing procedure.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Operating machine. 3.2 Adjusting blending time. 3.3 Adjusting RPM. 3.4 Operating pump. 3.5 Testing density, viscosity, thixotropy and P^H. 3.6 Adding deflocculant and water
4. Required attitudes	<ul style="list-style-type: none"> 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.

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

Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Prepare Glaze
Unit Code	CERBGP4012A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare glaze. It includes following OSH practices, collecting materials, preparation milling machine, operating milling machine, monitoring operation and rectifying routine problems and cleaning and maintaining tools, equipment and work area.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Follow OSH practices	<p>1.1 All safety requirements / regulations are adhered to before, during and after use.</p> <p>1.2 Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.</p> <p>1.3 <i>Personal Protective Equipment (PPE)</i> is worn and Occupational Safety and Health (OSH) instructions are followed according to job specification.</p>
2. Prepare milling machine	<p>2.1 Parameters is set and requirements are identified.</p> <p>2.2 Correct type and quantity of materials are selected.</p> <p>2.2 <i>Material</i> records are updated as appropriate.</p> <p>2.3 Milling <i>machine</i> is washed by water accurately.</p>
3. Operate milling machine	<p>3.1 Materials are feed as per composition requirement.</p> <p>3.1 Milling machine feeding mouth is closed as per operating manuals.</p> <p>3.2 Milling time is set in accordance with job requirement.</p> <p>3.3 Milling machine is set up and started as per standard operating procedures.</p> <p>3.4 After complete the milling machine mouth nut is loosen for removing air from milling machine following safety requirement.</p> <p>3.5 Milling machine mouth is opened after remove air and</p>

	<p>perform test as required.</p> <p>3.6 Glaze is unloaded from milling machine and passed through vibrating sieve and magnetic ferro filter and preserved in blunger / tank.</p>
4. Monitor operation & Rectify routine problems	<p>4.1 Equipment performance are monitored in accordance with work instructions and manufacturer's specifications.</p> <p>4.2 Machine is adjusted and controlled to ensure correct body quality.</p> <p>4.3 The range of faults are identified and rectified fault causes that can occur during the operation in accordance with work instructions.</p> <p>4.4 Non-routine problems are identified and report to designated person.</p> <p>4.5 Records and log books of machine are completed and maintained as per enterprise procedure.</p>
5. Clean and maintain tools, equipment and work area	<p>5.1 Work area is cleaned; hand and / or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.</p> <p>5.2 Machine is cleaned and kept in a safe mode.</p> <p>5.3 Faulty equipment is tagged and reported in accordance with workplace practices.</p> <p>5.4 Unused materials are collected and stored for re-use or disposal following workplace procedures.</p> <p>5.5 Waste materials are dealt with following workplace procedures.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Personal Protective Equipment (PPE)	<p>1.1 Mask</p> <p>1.2 Hair nets</p> <p>1.3 Ear muffs / plugs</p> <p>1.4 Gloves</p> <p>1.5 Footwear and protective clothing</p> <p>1.6 Helmet</p>
2. Materials	<p>2.1 Clay materials</p> <p>2.2 Stone materials</p> <p>2.3 Colour materials</p> <p>2.4 Calcium carbonate</p> <p>2.5 Zinc oxide</p> <p>2.6 Zirconium silicate</p>

	<ul style="list-style-type: none"> 2.7 Additive chemicals 2.8 Fluxing materials 2.9 Water
3. Machine	<ul style="list-style-type: none"> 3.1 Ball mill 3.2 Pot mill 3.3 Rod mill
4. Equipment	<ul style="list-style-type: none"> 4.1 Balance / Scale 4.2 Trolley 4.3 Lift 4.4 Conveyer belt 4.5 Balcha 4.6 Pipe 4.7 Water flow meter 4.8 Compressed air 4.9 Ball stone 4.10 Vibrating sieve 4.11 Magnetic ferro filter
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. Critical aspects of competency	<p>Assessment required evidences that the candidate</p> <ul style="list-style-type: none"> 1.1 feed materials as per composition requirement; 1.2 set milling time, density, viscosity and residue; 1.3 monitored quality to minimize wastage; and 1.4 opened milling machine mouth.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Material handling requirements and techniques. 2.2 Principles of mixing machine operation. 2.3 Impact of variations in glaze. 2.4 Type of glaze. 2.5 Properties of the glaze mixture. 2.6 Properties of the colouring materials. 2.7 Calculate the critical speed of mixing machine. 2.8 Equipment limitations and impact on mixing machine efficiency and effectiveness.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Operating machine. 3.2 Adjusting milling time. 3.3 Rectifying faults. 3.4 Preparing mixer materials. 3.5 Opening the mixing machine mouth. 3.6 Maintaining tools and equipment.

4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p> <p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualifications Framework for Bangladesh
Unit of Competency**

Unit Title	Apply Quality Standards
Unit Code	CERGLZ4013A1
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply quality standards. It includes assessing own work, quality of received components, parts or materials, measuring components, parts or materials and investigating causes of quality deviations.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <i>Bold & Italicized</i> terms are elaborated in the Range of Variables
1. Assess own work	<p>1.1 Completed work is checked continuously as per workplace standards relevant to <i>competitive systems and practices</i>.</p> <p>1.2 Faulty components, products and processes are identified and isolated.</p> <p>1.3 Faults and any identified causes to the supervisor concerned is recorded and/or reported, where required, in accordance with workplace procedures.</p>
2. Assess quality of received components, parts or materials	<p>2.1 Received components, parts, materials, information, service are checked with <i>quality parameters</i> continuously as per workplace standards and specifications.</p> <p>2.2 <i>Quality checks</i> is performed to identify faults.</p> <p>2.3 Faults and any identified causes is recorded and / or reported in accordance with workplace procedures.</p> <p>2.4 Faults are identified and rectified as specified in workplace procedures.</p>
3. Measure components, parts or materials	<p>3.1 Measuring instruments are selected and collected as required.</p> <p>3.2 Materials, component, parts, information, service and products are measured in accordance with workplace procedures.</p>

4. Investigate causes of quality deviations	<p>4.1 Causes of deviations from specified quality standards for components are Investigated and reported.</p> <p>4.2 Causes of deviations from specified quality standards of materials are identified.</p> <p>4.3 Suitable preventative action based on workplace quality standards is recommended.</p>
Range of Variables	
Variable	Range (may include but not limited to:)
1. Competitive systems and practices	<p>1.1 Lean operations</p> <p>1.2 Agile operations</p> <p>1.3 5S</p> <p>1.4 Kaizen</p>
2. Quality parameters	<p>2.1 Finish</p> <p>2.2 Size</p> <p>2.3 Durability</p>
3. Quality checks	<p>3.1 Visual inspection</p> <p>3.2 Physical measurements</p>
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. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <p>1.1 assessed quality of received components, parts or materials;</p> <p>1.2 measured components, parts or materials;</p> <p>1.3 investigated causes of quality deviations; and</p> <p>1.4 checked and measured relevant quality parameters.</p>
2. Underpinning knowledge	<p>2.1 Relevant quality standards, policies and procedures.</p> <p>2.2 Relevant production processes, materials and products.</p> <p>2.3 Workplace procedures.</p> <p>2.4 Reporting procedures.</p>
3. Underpinning skills	<p>3.1 Interpreting work instructions.</p> <p>3.2 Carrying out visual inspections.</p> <p>3.3 Meeting work specifications.</p> <p>3.4 Interpreting and applying defined procedures.</p>
4. Required attitudes	<p>4.1 Commitment to occupational safety and health.</p> <p>4.2 Promptness in carrying out activities.</p> <p>4.3 Sincere and honest to duties.</p> <p>4.4 Eagerness to learn.</p>

	<p>4.5 Tidiness and timeliness.</p> <p>4.6 Environmental concerns.</p> <p>4.7 Respect for rights of peers and seniors at workplace.</p> <p>4.8 Communication with peers and seniors at workplace.</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated);</p> <p>5.2 tools, equipment and physical facilities appropriate to perform activities; and</p> <p>5.3 materials, consumables to perform activities.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test;</p> <p>6.2 demonstration;</p> <p>6.3 oral questioning; and</p> <p>6.4 portfolio.</p>
7. Contexts of assessment	<p>7.1 Competency assessment must be done in a training centre or in an actual or simulated workplace after completion of the training module.</p> <p>7.2 Assessment should be done by a BTEB certified assessor.</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

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