

# TEXTILE PRE-TREATMENT

**UNIT CODE:** ENG/CU/TXP/CR/01/5/A

## Relationship to Occupational Standards

This unit addresses the unit of competency: **Produce pre-treated textiles**

**Duration of Unit:** 150 hours

## Unit Description

This unit describes the competencies required by a textile processing craft person to produce pre-treated textiles. It involves competencies required to obtain grey fabric, inspect grey fabric, carry out singeing, carry out desizing, carry out scouring, carry out bleaching, carry out mercerization, carry out washing and document pre-treatment process.

## Summary of Learning Outcomes

1. Obtain grey fabric
2. Inspect grey fabric
3. Carry out singeing
4. Carry out desizing
5. Carry out scouring
6. Carry out bleaching
7. Carry out mercerization
8. Carry out washing
9. Document pre-treatment process

## Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Obtain Grey fabric	<ul style="list-style-type: none"><li>• Classification of fabrics</li><li>• Classification of yarns</li><li>• Safety procedures</li><li>• Operation standards</li><li>• Characteristics of grey fabric</li></ul>	<ul style="list-style-type: none"><li>• Oral questions</li><li>• Written tests</li><li>• Observation</li><li>• Practical</li><li>• Individual assignments</li><li>• Group assignments</li></ul>
2. Inspect Grey fabric	<ul style="list-style-type: none"><li>• Inspection techniques</li><li>• Inspection tools</li><li>• Inspection equipment</li><li>• Safety measures</li><li>• Inspection procedure</li></ul>	<ul style="list-style-type: none"><li>• Oral questions</li><li>• Written tests</li><li>• Observation</li><li>• Practical</li></ul>

		<ul style="list-style-type: none"> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>
3. Carry out singeing	<ul style="list-style-type: none"> <li>• Objectives of singeing</li> <li>• Singeing methods</li> <li>• Singeing process</li> <li>• Merits and demerits of singeing</li> <li>• Precautions of singeing</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>
4. Carry out desizing	<ul style="list-style-type: none"> <li>• Objectives of desizing</li> <li>• Desizing methods</li> <li>• Desizing mechanism/ process</li> <li>• Precautions during desizing</li> <li>• Desizing faults</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>
5. Carry out scouring	<ul style="list-style-type: none"> <li>• Objectives of scouring</li> <li>• Scouring methods</li> <li>• Scouring mechanism/ process</li> <li>• Precautions of scouring.</li> <li>• Scouring faults</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>
6. Carry Out bleaching	<ul style="list-style-type: none"> <li>• Aim of bleaching</li> <li>• Bleaching methods</li> <li>• Types of bleaching agents</li> <li>• Mechanism of bleaching</li> <li>• Bleaching precautions</li> <li>• Bleaching faults</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> <li>• Individual assignments</li> <li>• Group assignments</li> <li>•</li> </ul>
7. Carry out mercerization	<ul style="list-style-type: none"> <li>• Objectives of mercerization</li> <li>• Mercerization process</li> <li>• Significance of different steps in mercerization cycle</li> <li>• Mercerization control parameters</li> <li>• Effects of mercerization</li> <li>• Mercerizing machine</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>
8. Carry out washing	<ul style="list-style-type: none"> <li>• Objectives of washing</li> <li>• Washing techniques</li> <li>• Washing mechanism</li> <li>• Types of washing agents</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> </ul>

		<ul style="list-style-type: none"> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>
9. Document pre-treatment process	<ul style="list-style-type: none"> <li>• Documentation tools and equipment</li> <li>• Technical report writing for maintenance</li> <li>• Filing and data storage</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Observation</li> <li>• Practical</li> <li>• Individual assignments</li> <li>• Group assignments</li> </ul>

### Suggested Methods of Instruction

- Instructor led facilitation of theory
- Illustrative diagrams
- Practical work by trainee(s)
- Group discussions
- Exercises by trainee(s)
- Industrial visits to textile mills pre-treatment department
- Power point presentation and videos

### Recommended Resources

- Tools, Equipment, Materials and supplies
- Fabric lot
- Desizing machine
- Singeing machine
- Bleaching machine
- Scouring machine
- Mercerizing machine
- Washing machine
- Bleaching chemicals
- Washing chemicals
- Mercerizing chemicals
- Scouring chemicals
- pH scale
- PPE
- Thermometer
- Rotating batcher
- Fabric Beams
- Documentation tool and equipment
- Stationeries

- Overhead projector/ Black or white board
- Computer and its accessories
- Weighing balance

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