



**NAME: FUNDAMENTALS OF OCCUPATIONAL RISK MANAGEMENT IN THE CHEMICAL INDUSTRY**

**MC CODE:SSD/M0106**

**VERSION:1.0**

**NSQF LEVEL:4**



## Table of Content

MC Description.....	3
Qualification Parameters .....	3
Performance Criteria / Outcomes.....	5
Assessment Guidelines .....	8
Acronyms.....	8
Glossary.....	9



## MC Description

Fundamentals of Occupational Risk Management in the Chemical Industry is crucial due to the inherent hazards associated with chemicals and chemical processes. The Micro Credential deals with effective risk management, protecting workers, preventing accidents, and ensure regulatory compliance.

## Parameters

Developed by	:	Safety Skill Development Foundation
MC Code	:	SSD/M0106
MC name	:	FUNDAMENTALS OF OCCUPATIONAL RISK MANAGEMENT IN THE CHEMICAL INDUSTRY
NSQF Level	:	4
Used by Sectors	:	Education, Training & Research; Hydrocarbon, Iron & steel, Mining, Power, Automotive, Construction, Chemicals & Petrochemicals and others.
Occupation	:	Chemical Safety Management
Country	:	India
Minimum Age	:	NA



Minimum Educational Qualification & Experience	:	12th grade pass or equivalent OR 10th grade pass or equivalent with 3 years of relevant experience OR Previous relevant qualification of NSQF level 3 with 3 years of relevant experience
Training Duration	:	Training - 15 hours and Assessment – 1 hours
NSQC Approval Date	:	08-05-2025
Next Review Date	:	08-05-2028
Version	:	1.0
Reference code on NQR	:	NM-04-ET-04309-2025-V1-SSDF
NQR Version	:	1.0

## Scope

- Occupational risks & hazards in the chemical industry associated with chemicals and chemical processes.
- Identification & evaluation of risks & hazards and steps for its mitigation.
- Measures to protect workers, use of PPEs, prevent accidents and ensure regulatory compliances.
- Planning & management of emergency situations.



## Performance Criteria

The certified professional on this MC will be able to understand:

- PC1.** Identify chemical hazards, carryout risk assessments including those associated with new chemicals or processes.
- PC2.** Apply effective application of engineering controls, administrative controls, and personal protective equipment (PPE)
- PC3.** Carryout regular evaluation of the effectiveness of risk control measures and prompt adjustments as needed and continuous improvement in risk management practices.
- PC4.** Develop emergency response plans and procedures and carryout regular testing of emergency response plans and procedures.
- PC5.** Comply with local, national, and international safety regulations and standards (e.g., OSHA, EPA, REACH) and internal and external audits to ensure ongoing compliance with regulations.
- PC6.** Maintain accurate record-keeping and carryout timely reporting of incidents and compliance status and monitoring & analysis of safety performance indicators, such as incident rates, lost-time injuries, and near-misses.
- PC7.** Carryout regular training for employees on safety procedures, emergency response, and proper handling of chemicals.
- PC8.** Ensure regular health checks for employees exposed to hazardous chemicals.
- PC9.** Promote a strong safety culture within the organization, emphasizing the importance of risk management and prioritize occupational risk management efforts.

## Knowledge and Understanding (KU)

The certified professional on this MC will be able to know and understand followings:

- KU1.** Identification of chemical hazards, risk assessments, application of engineering controls, administrative controls, and personal protective equipment (PPE).
- KU2.** Evaluation of risk control measures, risk management practices, emergency response plans and procedures.
- KU3.** Local, national, and international safety regulations and standards



- KU4.** Record-keeping, reporting, monitoring & analysis of safety performance indicators,
- KU5.** Training for employees on safety procedures, emergency response, proper handling of chemicals.
- KU6.** Health checks required for employees exposed to hazardous chemicals.

### Generic Skills (GS)

The certified professional on this MC should know followings for better performance:

- GS -1 Reading and writing in the language of communication.
- GS -2 Effective verbal communication in the local language.
- GS -3 Mathematics and utilizing Analysing processes & tools.
- GS -4 Planning, organizing, and optimizing resources and utilizing planning and monitoring tools, as well as operating software
- GS-5 Administration, decision making, and conflict resolution.
- GS -6 Understanding of rules & regulations and adherence to instructions
- GS -7 Understanding safety measures and adhering to safety protocols.
- GS-8 Demonstrating professional behaviour when interacting with co-workers and employees.
- GS -9 Proper utilization of personal protective equipment.

### Assessment Criteria

Performance Criteria	Theory marks	Practical marks	Project Marks	Viva marks	Total marks
PC-1 Identify chemical hazards, carryout risk assessments including those associated with new chemicals or processes.	6	6			12
PC-2 Apply effective application of engineering controls, administrative controls, and personal protective equipment (PPE).	5	6			11



PC-3 Carryout regular evaluation of the effectiveness of risk control measures and prompt adjustments as needed and continuous improvement in risk management practices.	5	6			11
PC-4: Develop emergency response plans and procedures and carryout regular testing of emergency response plans and procedures.	5	6			11
PC-5 Comply with local, national, and international safety regulations and standards (e.g., OSHA, EPA, REACH) and internal and external audits to ensure ongoing compliance with regulations.	5	6			11
PC-6 Maintain accurate record-keeping and carryout timely reporting of incidents and compliance status and monitoring & analysis of safety performance indicators, such as incident rates, lost-time injuries, and near-misses.	5	6			11
PC-7 Carryout regular training for employees on safety procedures, emergency response, and proper handling of chemicals.	5	6			11
PC-8 Ensure regular health checks for employees exposed to hazardous chemicals.	5	6			11
PC-9 Promote a strong safety culture within the organization, emphasizing the importance of risk management and prioritize occupational risk management efforts.	5	6			11
<b>MC Total Marks</b>	<b>46</b>	<b>54</b>			<b>100</b>

## Guidelines for Assessment

1. The assessment criteria given is for Micro credential “**FUNDAMENTALS OF OCCUPATIONAL RISK MANAGEMENT IN THE CHEMICAL INDUSTRY**”.
2. Assessments can be carried out offline as well as online and shall be carried by SSDF only.
3. Questions will be formed in such a way as to provide outcome on maximum Performance Criteria.
4. The assessment will be of one hour duration and will be based on multiple choice question; created / approved by the SSDF.
5. The certificate on MC will be issued to successful candidates who score 50% or more than 50%.



## Acronyms

SSDF	Safety Skill Development Foundation
NCVET	National Council for Vocational Education and Training
NSQF	National Skill Qualifications Framework
MC	Micro Credential
NOS	National Occupational Standards
QP	Qualification Pack

## Glossary

Key Words	Description
Safety Skill Development Foundation (SSDF)	An Awarding Body recognized by NCVET, Ministry of Skill Development & Entrepreneurship, Government of India.
NCVET (National Council for Vocational Education and Training)	Regulatory Authority of Government of India for Vocational Education and Training.



NSQF (National Skill Qualifications Framework)	National Skill Qualifications Framework is a framework under which skills are categorized from level 1 to 10.
Sector	Sector is conglomeration of different business operations having similar business and interests.
Sub-Sector	Sub-Sector is further breakdown of Sector based on the characteristics and business components.
Occupation	Occupation is a set of job roles requiring similar/related competencies in the industry.
Job role	Job role is a set of functions required to get an employment opportunity in the industry and perform a task as per industry norms.
Qualifications Pack (QP)	Qualifications Pack comprises the set of Occupational Standard, required to perform a job role and is assigned a unique qualification pack code.
National Occupational Standards (NOS)	NOS are Occupational Standards in the Indian context and approved by NCVET.
Micro Credential (MC)	A coherent set of skills, knowledge, and learning outcomes, needed by industry, employers, Government, or the community.
Performance Criteria (PC)	Performance Criteria are statements specifying the standard of performance required when carrying out a task.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, professional, and organizational specific knowledge that an individual, needs to perform to the required standard.
Generic Skills (GK)	Generic Skills are a group of skills typically needed in general to perform the task.



MC/NOS/QP Codes

MC/NOS/QP codes are unique identifier codes for MC/NOS/QP which starts from M/N/Q respectively