

MANUFACTURING INDUSTRY RISK ASSESSMENT

Document Information

Field	Details
Company Name	_____
Facility/Plant Name	_____
Assessment Date	_____
Assessor Name	_____
Assessor Position	_____
Department/Production Line	_____
Review Date	_____
Document Reference No.	RA-MFG-_____

1. Introduction

This Risk Assessment document is designed to identify, evaluate, and control hazards associated with manufacturing operations. The manufacturing industry presents diverse risks including machinery hazards, material handling injuries, exposure to industrial chemicals, noise-induced hearing loss, and ergonomic injuries. This assessment aims to ensure the health and safety of all workers by systematically identifying potential hazards and implementing appropriate control measures in accordance with occupational health and safety regulations and industry standards.

2. Scope of Assessment

This risk assessment covers the following manufacturing activities and areas:

- Raw material receiving and storage
- Production/assembly lines
- Machine shop operations
- Welding and fabrication
- Painting and coating operations
- Quality control and testing
- Packaging and shipping
- Maintenance and repair
- Warehouse operations
- Utility systems (compressed air, steam, etc.)
- Waste management
- Other: _____

Facility Address: _____

Number of Employees: _____

Operating Hours: _____

3. Risk Identification

Risk ID	Risk Description	Risk Category	Affected Area/Personnel
MFG-001			
MFG-002			
MFG-003			
MFG-004			
MFG-005			
MFG-006			
MFG-007			
MFG-008			
MFG-009			
MFG-010			

4. Risk Analysis Matrix

Risk Scoring Criteria

Likelihood Scale:

Score	Likelihood	Description
1	Rare	May occur only in exceptional circumstances
2	Unlikely	Could occur but not expected
3	Possible	Might occur at some time
4	Likely	Will probably occur in most circumstances
5	Almost Certain	Expected to occur in most circumstances

Impact Scale:

Score	Impact	Description
1	Negligible	Minor injury, no lost time
2	Minor	First aid treatment required
3	Moderate	Medical treatment, short-term disability
4	Major	Serious injury, long-term disability
5	Catastrophic	Fatality or permanent disability

Risk Analysis Table

Risk ID	Likelihood (1-5)	Impact (1-5)	Risk Score (L×I)	Risk Level
MFG-001				
MFG-002				
MFG-003				
MFG-004				
MFG-005				
MFG-006				
MFG-007				
MFG-008				
MFG-009				
MFG-010				

Risk Level Classification:

- **Low (1-4):** Acceptable risk, monitor and review
- **Medium (5-9):** Action required within reasonable timeframe
- **High (10-16):** Immediate action required

- **Critical (17-25):** Production must stop until risk is reduced

5. Risk Control Measures

Risk ID	Current Controls	Additional Controls Required	Responsible Person	Target Date	Status
MFG-001					<input type="checkbox"/>
MFG-002					<input type="checkbox"/>
MFG-003					<input type="checkbox"/>
MFG-004					<input type="checkbox"/>
MFG-005					<input type="checkbox"/>
MFG-006					<input type="checkbox"/>
MFG-007					<input type="checkbox"/>
MFG-008					<input type="checkbox"/>
MFG-009					<input type="checkbox"/>
MFG-010					<input type="checkbox"/>

6. Manufacturing Industry-Specific Hazards

The following hazards are commonly encountered in manufacturing operations:

6.1 Machinery Hazards

- Unguarded moving parts (gears, belts, pulleys)
- Pinch points and nip points
- Rotating equipment
- Cutting and shearing machines
- Presses and stamping equipment

6.2 Material Handling Hazards

- Forklift and industrial vehicle operations
- Overhead cranes and hoists
- Conveyor systems
- Manual lifting and carrying
- Falling objects from storage

6.3 Chemical Hazards

- Industrial solvents and cleaners
- Paints, coatings, and adhesives
- Lubricants and cutting fluids
- Welding fumes and gases
- Dust and particulates

6.4 Physical Hazards

- Excessive noise levels
- Vibration from tools and equipment
- Extreme temperatures (hot/cold)
- Poor lighting conditions
- Radiation (welding, UV curing)

6.5 Electrical Hazards

- High voltage equipment
- Damaged cords and connections
- Improper grounding
- Lockout/tagout failures
- Arc flash hazards

6.6 Ergonomic Hazards

- Repetitive motion injuries
- Awkward postures
- Forceful exertions
- Prolonged standing
- Vibration exposure

6.7 Fire and Explosion Hazards

- Flammable materials storage
- Combustible dust
- Hot work operations
- Electrical fires
- Compressed gas cylinders

6.8 Confined Space Hazards

- Tanks and vessels
- Silos and hoppers
- Pits and trenches
- Oxygen-deficient atmospheres

7. Machine Safety Assessment

7.1 Machine Guarding Checklist

Machine/Equipment	Guards in Place	Interlocks Working	Emergency Stop	Last Inspection
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

7.2 Lockout/Tagout (LOTO) Verification

Equipment	LOTO Procedure Available	Staff Trained	Locks/Tags Available
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

8. Emergency Response Procedures

8.1 Emergency Contacts

Role	Name	Contact Number
Plant Manager		
Safety Manager		
Maintenance Supervisor		
First Aid Officer		
Emergency Services		911 / 000 / 999
Fire Department		
Poison Control		

8.2 Emergency Procedures

Machine-Related Injury:

1. Press emergency stop immediately
2. Do not attempt to free trapped person without proper assistance
3. Call for first aid and emergency services
4. Preserve the scene for investigation
5. Complete incident report

Chemical Spill:

1. Evacuate immediate area
2. Identify the chemical (SDS)
3. Notify supervisor and safety personnel
4. Contain spill if safe to do so
5. Use appropriate PPE and spill kit
6. Document and report incident

Fire Emergency:

1. Activate fire alarm
2. Evacuate via nearest safe exit
3. Call emergency services
4. Use fire extinguisher only if trained and safe
5. Meet at designated assembly point
6. Do not re-enter until cleared

Electrical Emergency:

1. Do not touch the victim if still in contact with electricity
2. Disconnect power source if safe
3. Call emergency services
4. Begin CPR if trained and victim is unresponsive
5. Treat for burns and shock

Assembly Points: _____

9. Personal Protective Equipment (PPE) Requirements

PPE Item	Required	Specification
Safety Glasses	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: _____
Face Shield	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: _____
Hard Hat	<input type="checkbox"/> Yes <input type="checkbox"/> No	Class: _____
Hearing Protection	<input type="checkbox"/> Yes <input type="checkbox"/> No	NRR: _____
Safety Boots	<input type="checkbox"/> Yes <input type="checkbox"/> No	Steel toe: <input type="checkbox"/> Yes <input type="checkbox"/> No
Gloves	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: _____
Respiratory Protection	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: _____
Welding Helmet	<input type="checkbox"/> Yes <input type="checkbox"/> No	Shade: _____
High-Visibility Vest	<input type="checkbox"/> Yes <input type="checkbox"/> No	Class: _____
Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____

10. Sign-Off and Approval

Assessor Declaration

I confirm that this risk assessment has been conducted in accordance with applicable health and safety regulations and represents an accurate evaluation of the identified hazards.

Assessor Name:	_____
Signature:	_____
Date:	_____

Reviewer Declaration

I have reviewed this risk assessment and confirm that the control measures identified are appropriate and adequate.

Reviewer Name:	_____
Position:	_____
Signature:	_____
Date:	_____

Management Approval

I approve this risk assessment and authorize the implementation of the identified control measures.

Manager Name:	_____
Position:	_____
Signature:	_____
Date:	_____

11. Review Schedule

Review Type	Frequency	Next Review Date
Routine Review	Monthly	
Comprehensive Review	Annually	
Post-Incident Review	As required	
Equipment Change Review	As required	

Triggers for Immediate Review:

- Any workplace incident or near-miss
- New equipment installation
- Process changes
- Changes in chemicals or materials used
- Changes in regulations or standards
- Worker feedback or concerns

Document Control

Version	Date	Author	Changes Made
1.0			Initial version

This document is a template and should be customized to meet specific facility requirements and local regulatory requirements.