Manufacturing Hazard Identification Checklist

Use this checklist on your facility walk-through to capture every potential hazard.

1. Mechanical and Physical Hazards

- ☐ Moving machinery: unguarded belts, chains, gears, pulleys
- ☐ Pinch points and nip points: conveyor transitions, press feeds
- ☐ Rotating parts: shafts, couplings, rollers
- ☐ Sharp edges: cutting blades, shearing points, burrs on metal
- ☐ Crush hazards: forklifts, overhead hoists, rollover zones
- ☐ Stored energy: springs, hydraulic accumulators
- ☐ Flying debris: grinding sparks, metal fragments
- ☐ Thermal: hot surfaces (ovens, presses), steam lines
- ☐ Radiation: UV curing stations, industrial lasers
- ☐ Pressure systems: pressure vessels, compressed air lines

2. Electrical Hazards

- ☐ Exposed wiring: damaged cords, open junction boxes
- ☐ Improper grounding: floating frames, non-bonded panels
- ☐ Overloaded circuits: extension cords on permanent loads
- ☐ Faulty equipment: cracked insulation, damaged switches
- ☐ Lockout/Tagout: missing locks, incomplete procedures
- ☐ Arc flash/blast: absent personal protective equipment (PPE), no arc-flash labeling

3. Chemical and Dust Hazards

- ☐ Solvents and degreasers: flammability, inhalation risk
- ☐ Acids/bases: corrosive splash, fume release
- ☐ Dusts/powders: combustible dust, respiratory particulate
- ☐ Gases and vapors: volatile organic compounds (VOCs), ammonia, welding fumes
- ☐ Spill containment: bunds, drip trays, absorbents
- ☐ Storage: incompatible chemicals stored together
- ☐ Safety Data Sheets (SDS): current, accessible, reviewed

4. Ergonomic and Human-Factor Hazards

- ☐ Repetitive motions: stamping, packaging, data entry
- ☐ Forceful exertions: manual lifting greater than 20 lbs, heavy tools
- ☐ Awkward postures: overhead work, knee-level bends
- ☐ Static postures: prolonged standing or seated work
- ☐ Vibration: hand-arm tools, vibrating platforms
- ☐ Contact stress: sharp table edges, tool handles
- ☐ Work-rest cycles: inadequate breaks, job rotation, micro-pauses

5. Environmental and Facility Hazards

- ☐ Noise: machinery, compressed air, stamping presses
- ☐ Lighting: glare, flicker, insufficient illumination
- ☐ Temperature extremes: cold storage, hot ovens
- ☐ Air quality: dust, fumes, inadequate ventilation
- ☐ Slips/trips/falls: wet floors, uneven surfaces, clutter
- ☐ Housekeeping: material storage, waste disposal
- ☐ Fire and explosion: combustible dust, flammable liquids

6. Biological and Hygiene Hazards

- ☐ Mold/bacteria: damp storage, poor ventilation
- ☐ Bloodborne pathogens: first-aid stations, sharps disposal
- ☐ Vector control: pests in warehouses

7. Organizational and Procedural Hazards

- ☐ Inadequate training: new equipment, chemical handling
- ☐ Insufficient supervision: lone work, contractor oversight
- ☐ Emergency preparedness: missing or insufficient evacuation routes, eyewash stations
- ☐ Maintenance lapses: overdue inspections, undocumented repairs
- ☐ Work scheduling: excessive overtime, night shifts without breaks

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Risk Prioritization: Likelihood × Severity Matrix

How to Use This Matrix

1. Assign each identified hazard a Likelihood (1–5) and Severity (1–5).
2. Multiply: Likelihood × Severity equals Risk Score.
3. Locate the score in the matrix to determine priority (Low/Medium/High/Extreme).
4. Document the Risk Score and Priority next to each hazard in your assessment record.
5. Reassess after controls are in place to verify the score has been lowered.

Likelihood	Description
5 – Almost Certain	> 90% chance/year
4 – Likely	50–90% chance/year
3 – Possible	10–50% chance/year
2 – Unlikely	1–10% chance/year
1 – Rare	< 1% chance/year

Severity	Example Outcome
5 – Catastrophic	Fatality or multiple fatalities
4 – Major	Permanent disability; multiple hospitalizations
3 – Serious	Lost-time injury; hospitalization
2 – Moderate	Medical treatment; < 3 days lost work
1 – Minor	First aid only; no lost work time

Risk Matrix

	Minor Severity	Moderate Severity	Serious Severity	Major Severity	Catastrophic Severity
5 Almost Certain	Medium (5)	High (10)	Extreme (15)	Extreme (20)	Extreme (25)
4 Likely	Medium (4)	High (8)	High (12)	Extreme (16)	Extreme (20)
3 Possible	Low (3)	Medium (6)	High (9)	High (12)	Extreme (15)
2 Unlikely	Low (2)	Low (4)	Medium (6)	High (8)	High (10)
1 Rare	Low (1)	Low (2)	Medium (3)	Medium (4)	High (5)

Legend:

Low (1–3): Acceptable; manage by routine procedures.
Medium (4–6): Requires planned corrective action.
High (8–12): Urgent action required; assign responsibility & deadline.
Extreme (15–25): Stop work until controls are implemented.