✅ ChecklistGuro

Process Hazard Analysis (PHA) Checklist

Process Description & Scope

Ensures a complete and accurate understanding of the process being analyzed.

Process Name

Write something...

Process Description (Detailed)

Write something...

Process Capacity (e.g., Units/Hour)

Enter a number...

Raw Materials Used (List)

Write something...

Process Flow Diagram (PFD) Description & Location

Write something...

Process Flow Diagram (PFD) - Uploaded File

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Equipment List & Key Operating Parameters

Write something...

Process Phase (e.g., Mixing, Reaction, Drying)

☐ Mixing

☐ Reaction

☐ Separation

☐ Drying

☐ Formulation

☐ Packaging

Boundaries of the Analyzed Process (Start & End Points)

Write something...

Hazard Identification

Identifies potential hazards associated with the manufacturing process, equipment, and materials.

Describe the process flow and key equipment involved.

Write something...

Identify raw materials used in the process. (Select all that apply)

☐ Chemical A

☐ Chemical B

☐ Material C

☐ Other (Specify in LONG_TEXT)

List any potential deviations from normal operating conditions (e.g., pressure, temperature, flow rate).

Write something...

Identify potential energy sources present in the process. (Select all that apply)

☐ Electrical

☐ Thermal

☐ Mechanical

☐ Chemical (e.g., flammable, corrosive)

☐ Pressure

Describe any known hazards associated with the chemicals used in the process (refer to SDS/MSDS).

Write something...

Identify any potential ignition sources in the area. (e.g., open flames, sparks, hot surfaces)

Write something...

Describe any potential release scenarios (e.g., spills, leaks, explosions).

Write something...

Upload relevant process diagrams and layouts.

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Risk Assessment (Severity & Probability)

Evaluates the potential consequences (severity) and likelihood (probability) of the identified hazards.

Severity Rating - What's the worst possible consequence?

☐ Catastrophic (Loss of Life, Major Environmental Damage)

☐ Critical (Serious Injury, Significant Environmental Release)

☐ Moderate (Minor Injury, Limited Environmental Impact)

☐ Minor (First Aid, Minimal Environmental Impact)

Probability Rating - How likely is this consequence to occur?

☐ Frequent (Expected to occur several times per year)

☐ Likely (Expected to occur once a year)

☐ Possible (Could occur sometime during the lifetime of the facility)

☐ Unlikely (Highly improbable to occur)

Severity Score (Assign a numerical value based on the severity rating)

Enter a number...

Probability Score (Assign a numerical value based on the probability rating)

Enter a number...

Justification for Severity Rating

Write something...

Justification for Probability Rating

Write something...

Risk Matrix Category (Based on Severity & Probability Scores)

☐ High

☐ Medium

☐ Low

Notes/Comments

Write something...

Existing Controls & Safeguards

Documents the controls already in place to mitigate the identified hazards.

Are safety interlocks present and functioning on critical equipment?

☐ Yes, documented and tested annually

☐ Yes, but testing is less frequent

☐ No

☐ Not Applicable

Describe the existing alarm system and its response procedures.

Write something...

What type of pressure relief devices are in place?

☐ Spring-loaded relief valve

☐ Rupture disk

☐ Pilot-operated relief valve

☐ Combination

☐ None

What is the frequency of inspections for critical safety devices?

Enter a number...

Describe any Standard Operating Procedures (SOPs) related to this process.

Write something...

Are lockout/tagout procedures in place and followed?

- [ ] Yes, documented and enforced
- [ ] Yes, but enforcement needs improvement
- [ ] No
- [ ] Not Applicable

Which of the following Personal Protective Equipment (PPE) is required for this process?

- [ ] Safety Glasses
- [ ] Gloves
- [ ] Respirator
- [ ] Hearing Protection
- [ ] Other (Specify)

Date of last inspection of fire suppression system.

Enter date...

Recommended Risk Reduction Measures

Identifies and prioritizes additional measures to reduce the risk to acceptable levels.

Detailed Description of Proposed Mitigation

Write something...

Estimated Cost of Mitigation (USD)

Enter a number...

Target Completion Date for Mitigation

Enter date...

Responsibility for Implementation

☐ Engineering

☐ Operations

☐ Maintenance

☐ Safety

Relevant Departments to Notify

☐ Production

☐ Quality

☐ Maintenance

☐ Safety

Rationale/Justification for Chosen Mitigation

Write something...

Supporting Documentation (e.g., drawings, vendor specs)

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Status of Mitigation

☐ Not Started

☐ In Progress

☐ Completed

☐ Deferred

Management of Change (MOC)

Addresses how changes to the process, equipment, or materials will be reviewed and approved.

Describe the proposed change to the process, equipment, or materials.

Write something...

Justification for the change - Why is this change necessary?

Write something...

Type of Change (Select one)

☐ Equipment Modification

☐ Process Modification

☐ Material Substitution

☐ Personnel Change

☐ Procedure Modification

☐ Other

Estimated Cost of Change (USD)

Enter a number...

Proposed Implementation Date

Enter date...

Potential Hazards Identified due to this change (Select all that apply)

☐ Increased Risk of Fire

☐ Increased Risk of Explosion

☐ Increased Chemical Exposure

☐ Equipment Failure

☐ Process Instability

☐ Personnel Safety Concerns

☐ Environmental Impact

☐ No Identified Hazards

Reviewer Name

Write something...

Reviewer Signature

Training & Competency

Verifies adequate training and competency of personnel involved in the process.

List the core competencies required for personnel involved in this process.

- ☐ Process Knowledge
- ☐ Equipment Operation
- ☐ Hazard Recognition
- ☐ Emergency Procedures
- ☐ Lockout/Tagout
- ☐ Personal Protective Equipment (PPE)

Number of personnel trained on this process.

Enter a number...

Date of last training session for this process.

Enter date...

Describe the content of the training program.

Write something...

Training Method Used

- ☐ Classroom
- ☐ On-the-Job Training
- ☐ Computer-Based Training
- ☐ Simulated Training

Upload copies of training records/certificates.

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Verification of Competency Method

- ☐ Written Exam
- ☐ Practical Demonstration
- ☐ Observation
- ☐ Other

Describe the method used to verify individual competency.

Write something...

Emergency Response & Procedures

Ensures adequate emergency response procedures are in place and personnel are trained.

Describe the established emergency shutdown (ESD) procedure for the process.

Write something...

Which emergency response teams are available and notified during an incident?

- ☐ Fire Department
- ☐ Medical Team
- ☐ Spill Response Team
- ☐ Security
- ☐ Environmental Team
- ☐ Other (Specify)

Estimated evacuation time to designated assembly areas (in minutes).

Enter a number...

Describe the communication methods used to alert personnel during an emergency.

Write something...

Are emergency drills conducted regularly?

☐ Yes

☐ No

☐ Not Applicable

Date of last emergency response drill.

Enter date...

Summary of findings and corrective actions from the last emergency response drill.

Write something...

Are emergency procedures posted in accessible locations?

☐ Yes

☐ No

☐ Partially

Attach a copy of the emergency response plan.

⬆ Upload File

Review & Documentation

Covers the necessary review, approval, and documentation of the PHA process.

PHA Completion Date

Enter date...

PHA Revision Number

Enter a number...

Summary of PHA Findings & Conclusions

Write something...

PHA Report File

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PHA Review Status

☐ Not Reviewed

☐ Reviewed

☐ Approved

Reviewer Name

Write something...

Next PHA Review Date

Enter date...

PHA Lead Signature

Compliance & Regulatory Requirements

Confirms adherence to applicable regulatory requirements and industry standards.

Applicable OSHA Standards?

- [ ] 29 CFR 1910.119 (Process Safety Management)
- [ ] 29 CFR 1910.120 (Hazard Communication)
- [ ] Other (Specify in LONG_TEXT)
- [ ] Not Applicable

Relevant EPA Regulations?

- [ ] Clean Air Act
- [ ] Clean Water Act
- [ ] Resource Conservation and Recovery Act (RCRA)
- [ ] Emergency Planning and Community Right-to-Know Act (EPCRA)
- [ ] None Applicable

Documentation of Permit Requirements (e.g., Air Permits, Wastewater Permits)

Write something...

Last PHA Review/Update Date (per Regulatory Requirements)

Enter date...

Frequency of PHA Review (as per regulation or company policy)

Enter a number...

State-Specific Regulations?

☐ Yes (Specify in LONG_TEXT)
☐ No

Upload Copies of Relevant Permits

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