### Hazard Communication Pictograms

- **Health Hazard**: Represents any agent that can cause harm to health or safety through exposure or inhalation.
- **Biohazard**: Indicates a risk to human health from infectious or other hazardous agents.
- **Chemical Fire**: Warning sign for materials that can burn or react under certain conditions.
- **Explosion**: Shows the danger of a chemical explosion.
- **Electrical**: Represents electrical hazards.
- **Corrosive**: Indicates chemicals that can damage skin or eyes.
- **Flammable**: Represents materials that can ignite or burn.
- **鳌化物**: Indicates the presence of radioactive materials.
- **Other Hazards**: Represents any other hazards.

### Substitutions

| 25 | Poison Hazard | Chlorine based on explain the basis of hazardousness.
| 26 | Explosion Hazard | Change design to eliminate the hazard.
| 76 | Automation | Use machine to eliminate human contact with hazardous materials.
| 106 | Hazard Mitigation | Target the hazard source or remove the hazardous material.
| 28 | Process Design | Use safer technology to eliminate the hazard.
| 47 | Warning | Provide a label that conveys necessary information.
| 89 | Emergency Plan | Provide information about the hazards and emergency procedures.
| 113 | Role-Playing: Experiments, such as those on highly volatile substances, can have consequences and cost effects.

### Physical Hazards

- **Corrosive**: Materials that can react with other substances to cause damage.
- **Explosive**: Materials that can react under certain conditions to cause an explosion.
- **Flammable**: Materials that can ignite or burn.
- **Electrical**: Materials that can cause electrical shock.
- **Biological**: Materials that can cause biological harm.
- **Toxic**: Materials that can cause harm to health.
- **Other Hazards**: Materials that can cause any other type of harm.

### Behavioral Hazards

- **Inadequate Training**: Workers who are not trained to handle hazardous materials.
- **Lack of Supervision**: Supervisors who do not monitor workers properly.
- **Non-Compliance**: Workers who do not follow safety rules.
- **Misuse of Equipment**: Workers who use equipment incorrectly.
- **Lack of Management Commitment**: Management that does not support safety programs.

### Risk Assessment Techniques

- **Qualitative Risk Assessment**: The process of assessing the likelihood and severity of potential hazards.
- **Quantitative Risk Assessment**: The process of assessing the likelihood and severity of potential hazards using numerical values.
- **Process Hazard Analysis**: The process of identifying and evaluating hazards associated with processes.
- **Failure Mode and Effects Analysis**: The process of identifying potential failures in a system and assessing their effects.
- **Human-Factors Analysis**: The process of analyzing the impact of human factors on safety.

### Engineering Controls

- **Isolation**: Separating people from hazards.
- **Reduction**: Reducing the amount of exposure.
- **Substitution**: Using safer substances or processes.
- **Ventilation**: Removing hazardous substances from the workplace.
- **Personal Protective Equipment**: Using personal protective equipment to protect workers.

### Administrative Controls

- **Training**: Training workers to use equipment safely.
- **Policies**: Developing policies to ensure safe work practices.
- **Procedures**: Developing procedures to ensure safe work practices.
- **Labeling**: Labeling equipment to ensure safe use.
- **Monitoring**: Monitoring the effectiveness of safety programs.

### Personal Protective Equipment

- **Eye Protection**: Glasses or goggles to protect eyes.
- **Respiratory Protection**: Masks or respirators to protect the respiratory system.
- **Hearing Protection**: Earplugs or earmuffs to protect the ears.
- **Skin Protection**: Gloves or other protective clothing to protect the skin.

### Response Plans

- **Incident Response Plan**: A plan for responding to emergencies.
- **Emergency Response Plan**: A plan for responding to emergencies.
- **Communication Plan**: A plan for communicating with employees and the public.

### Green Chemistry

- **Substitution**: Replacing hazardous substances with safer alternatives.
- **Reduction**: Reducing the amount of hazardous substances used.
- **Recycling**: Recycling hazardous substances.
- **Energy**: Using less energy to produce hazardous substances.

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**Warning**: Always consult a professional before implementing any changes to your safety protocols.