

13. CHEMICAL SAFETY

KNOW THE CHEMICAL. RESPECT THE HAZARD. PROTECT YOUR HEALTH.

WHY THIS MATTERS

Many workplace chemicals can be hazardous to health and safety if not handled, stored, used and disposed of properly.

Chemical exposures can cause burns, poisoning, respiratory problems, long-term health effects and even fires or explosions.

Safe handling today prevents illness, injury and environmental harm.

COMMON CHEMICAL HAZARDS

FLAMMABLE / EXPLOSIVE
Can ignite easily and cause fire or explosion.

TOXIC / POISONOUS
Can cause serious illness or death if inhaled, swallowed or absorbed.

CORROSIVE
Can cause severe skin burns and eye damage.

HEALTH HAZARDS
May cause long-term effects such as cancer, respiratory disease or organ damage.

ENVIRONMENTAL HAZARDS
Can harm the environment if released or disposed of improperly.



WRONG WAY ❌



RIGHT WAY ✅

READ THE LABEL – KNOW THE HAZARD

Look for GHS Symbols

- Flame (Flammable)
- Skull and Crossbones (Toxic)
- Corrosion (Corrosive)
- Exclamation Mark (Irritant / Harmful)
- Health Hazard (Serious Health Effects)
- Environment (Aquatic Toxicity)

Always read the label and follow instructions.

SAFE CHEMICAL HANDLING – 6 KEY RULES

<p>1</p> <p>KNOW THE CHEMICAL</p> <p>Read the label and Safety Data Sheet (SDS) before use.</p>	<p>2</p> <p>USE PPE</p> <p>Wear the right PPE: gloves, goggles, apron, mask, etc.</p>	<p>3</p> <p>WORK IN WELL-VENTILATED AREAS</p> <p>Use local exhaust ventilation when available.</p>	<p>4</p> <p>USE THE RIGHT CONTAINER</p> <p>Use only compatible, labeled containers. Never use food or drink containers.</p>	<p>5</p> <p>AVOID SPILLS AND LEAKS</p> <p>Handle carefully. Keep containers closed when not in use.</p>	<p>6</p> <p>DISPOSE PROPERLY</p> <p>Dispose of chemicals and containers according to procedures and regulations.</p>
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DO'S – FOLLOW THESE

- ✓ Read labels and SDS before use.
- ✓ Use only trained and authorized personnel.
- ✓ Wear appropriate PPE.
- ✓ Use the minimum amount necessary.
- ✓ Keep containers closed when not in use.
- ✓ Store chemicals in designated areas.
- ✓ Keep work area clean and orderly.
- ✓ Report spills, leaks or exposures immediately.

DON'TS – AVOID THESE

- ✗ Do not mix chemicals unless instructed.
- ✗ Do not eat, drink or smoke in chemical areas.
- ✗ Do not pipette by mouth.
- ✗ Do not use damaged or unlabeled containers.
- ✗ Do not store incompatible chemicals together.
- ✗ Do not leave chemicals unattended.
- ✗ Do not ignore signs of spills or leaks.
- ✗ Do not bypass safety devices or procedures.

STORAGE GUIDELINES

- ✓ Store in original containers.
- ✓ Keep containers labeled.
- ✓ Store in cool, dry, well-ventilated areas.
- ✓ Store incompatible chemicals separately.
- ✓ Keep away from heat, ignition and direct sunlight.
- ✓ Keep storage areas locked and secure.

IN CASE OF EMERGENCY

- Spill / Leak**
- Stop the source if safe.
 - Contain the spill.
 - Clean up using proper materials.
- Exposure**
- Move to fresh air.
 - Remove contaminated clothing.
 - Seek medical attention.
- Report all incidents immediately.

DISCUSSION QUESTIONS

- 1 What chemicals do we use in our workplace?
- 2 Where can we find the SDS for these chemicals?
- 3 What PPE is required for handling these chemicals?
- 4 What should we do in case of a spill or exposure?



KEY TAKEAWAY

RESPECT CHEMICALS. FOLLOW PROCEDURES. PROTECT YOURSELF AND OTHERS.

- ✓ Know the hazard.
- ✓ Use the right PPE.
- ✓ Handle with care.
- ✓ Store safely.
- ✓ Dispose properly.



REAL-LIFE EXAMPLE

A worker transferred a solvent to an unlabeled container and left it open. Another worker mistakenly used it for cleaning, resulting in skin burns and respiratory irritation. The incident was prevented in the future by using proper labeling, training and strict chemical handling procedures. Small mistakes can lead to serious consequences.



CHEMICAL SAFETY CHECKLIST

- ✓ Labels are clear and readable.
- ✓ SDS is available and accessible.
- ✓ PPE is available and in good condition.

- ✓ Chemicals are stored safely.
- ✓ Incompatible chemicals are separated.
- ✓ Spill kits are available.



REMEMBER

When in doubt, STOP and ask. Safety first, always.

REPORT AND SEEK HELP

Report hazards, spills and exposures immediately. Your action can save a life.

SUPERVISOR SIGN-OFF

Discussed with crew by: _____ Date: _____

SAFETY MESSAGE

Chemical safety is everyone's responsibility. Work safely. Live safely. Go home healthy.