



TOOLBOX TALK – CHEMICAL SAFETY – SAFE HANDLING, STORAGE AND USE OF CHEMICALS

Objective

To educate employees on the safe handling, storage, transportation, and disposal of chemicals to prevent injuries, occupational illnesses, fires, explosions, and environmental contamination.

What is Chemical Safety?

Chemical safety involves identifying chemical hazards and following safe work practices to protect people, property, and the environment. Every chemical has potential hazards that must be understood before use.

Why is Chemical Safety Important?

Improper handling of chemicals can result in:

- Chemical burns
- Skin irritation
- Eye injuries
- Poisoning
- Respiratory problems
- Fire and explosions
- Environmental pollution
- Long-term occupational diseases
- Fatal accidents

Understanding chemical hazards helps prevent serious incidents.

Common Chemical Hazards

Chemicals may be:

- Flammable
- Explosive
- Toxic
- Corrosive
- Oxidizing
- Irritant
- Reactive
- Carcinogenic



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- Environmentally Hazardous
- Compressed Gases

Routes of Chemical Exposure

Chemicals can enter the body through:

- Inhalation (Breathing)
- Skin Contact
- Eye Contact
- Ingestion (Swallowing)
- Injection through cuts or punctures

Understanding Safety Data Sheets (SDS)

Before using any chemical, review the Safety Data Sheet (SDS), which provides information on:

- Chemical identification
- Hazards
- Safe handling procedures
- Required PPE
- First aid measures
- Fire-fighting measures
- Spill response
- Safe storage
- Disposal requirements

Always ensure the SDS is readily available at the workplace.

Safe Chemical Handling Procedure

1. Read Labels and SDS

Never use a chemical without understanding its hazards and safe handling requirements.

2. Wear Appropriate PPE

Use the PPE specified in the SDS and risk assessment.



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3. Store Chemicals Properly

Store chemicals in approved containers with clear labels and segregate incompatible chemicals.

4. Ensure Proper Ventilation

Use chemicals only in well-ventilated areas or under local exhaust ventilation where required.

5. Handle Chemicals Carefully

Avoid splashing, spilling, or creating unnecessary exposure.

6. Clean Spills Immediately

Use approved spill kits and follow the emergency spill response procedure.

7. Dispose of Chemicals Safely

Dispose of chemical waste according to company procedures and legal regulations.

Chemical Safety Do's

- Read the label before use.
- Review the Safety Data Sheet (SDS).
- Wear the required PPE.
- Keep chemical containers properly labelled.
- Store chemicals in designated areas.
- Keep lids tightly closed.
- Use spill kits for chemical leaks.
- Wash hands after handling chemicals.
- Report damaged containers immediately.
- Follow company chemical handling procedures.

Chemical Safety Don'ts

- Never mix chemicals unless authorized.
- Never remove or alter chemical labels.
- Never use unlabelled containers.



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- Never eat, drink, or smoke near chemicals.
- Never smell chemicals directly.
- Never dispose of chemicals into drains unless permitted.
- Never reuse chemical containers for other purposes.
- Never ignore spills or leaks.
- Never handle chemicals without proper training.

Required PPE

Depending on the chemical, use:

- Safety Helmet
- Chemical Splash Goggles
- Face Shield
- Chemical Resistant Gloves
- Chemical Resistant Apron
- Long-Sleeved Protective Clothing
- Safety Shoes
- Respiratory Protection (if required)

Always select PPE based on the Safety Data Sheet (SDS).

Before Working with Chemicals

Confirm the following:

- Chemical label is clearly visible.
- SDS is available and understood.
- Risk assessment completed.
- Appropriate PPE is worn.
- Ventilation is adequate.
- Spill kit is available.
- Emergency eyewash and safety shower are accessible.
- Chemical containers are in good condition.
- Emergency procedures are understood.

If any answer is **No**, do not begin the work.

Emergency Response



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If a chemical incident occurs:

- Stop work immediately.
- Raise the alarm.
- Isolate the affected area.
- Use the appropriate spill kit if trained.
- Flush eyes or skin with water for at least 15 minutes if exposed.
- Seek medical attention immediately.
- Report the incident to your supervisor.

Key Safety Message

**IDENTIFY → READ SDS → WEAR PPE → HANDLE SAFELY → STORE CORRECTLY
→ REPORT SPILLS**

Safe chemical handling begins with understanding the hazards before starting work.

Toolbox Talk Takeaway

"Know the Chemical Before You Handle It."

Always read the label and Safety Data Sheet (SDS), wear the correct PPE, store chemicals safely, and report spills immediately. Safe chemical handling protects you, your co-workers, and the environment.