

Working with Dangerous Goods – Safe Handling Stats and Facts

FACTS

1. **Exposure to Toxic Substances:** Improper handling may release vapors, leading to inhalation hazards or skin contact injuries.
2. **Chemical Spills & Fires:** Dropped or ruptured containers can trigger dangerous spills—flammable or reactive materials pose fire/explosion risks.
3. **Environmental Contamination:** Spills can soil soil and waterways, harming ecosystems and incurring cleanup costs.
4. **Improper Storage & Segregation:** Storing incompatible chemicals together can result in dangerous reactions (e.g., oxidizers with flammables).
5. **Labeling & Documentation Errors:** Inadequate labels or wrong documentation may prevent personnel from properly recognizing hazards.
6. **Insufficient Training:** Workers lacking training may use incorrect procedures or PPE, increasing exposure risks.
7. **Inadequate PPE:** Not using protective gloves, respirators, or goggles can cause chemical burns, inhalation injuries, or visual damage.

STATS

- In 2024, OSHA recorded 5,190 workplace fatalities, with transportation and warehousing accounting for 14% (726 cases). Hazardous materials incidents contributed to 5% of fatalities, emphasizing the need for chemical-resistant PPE and respirators.
- In 2024, PPE violations (29 CFR 1910.132) ranked 6th across industries (1,876 citations), including inadequate chemical-resistant gloves or suits for dangerous goods. Respiratory Protection (29 CFR 1910.134) violations ranked 4th (2,800

citations), often due to improper respirator use.

- A 2022 NIOSH study found that 30% of workers handling hazardous chemicals lacked proper PPE, increasing risks of burns, dermatitis, or respiratory issues.
- WorkSafeBC reported 10–15 annual fatalities in transportation and warehousing in British Columbia (2020–2023), with 10% involving hazardous materials. Proper PPE and training could mitigate these risks.
- CCOHS 2023 data showed that workplaces enforcing chemical-resistant PPE and respirators reduced hazardous materials injuries by 22%, particularly for tasks like transferring corrosives or flammable liquids.
- In 2024, Ontario introduced fines up to \$500,000 for repeat OHS violations, including PPE non-compliance, impacting firms handling dangerous goods without proper safety gear.