Working with Dangerous Goods – Safe Storage Stats and Facts

FACTS

1. **Leakage & Spill Risks:** Containers can degrade over time, leading to leaks or catastrophic spills if not inspected.
2. **Incompatible Segregation:** Storing oxidizers next to flammables without barriers can trigger severe chemical reactions.
3. **Temperature Extremes & Pressure Buildup:** Fluctuating temperatures may increase internal pressure or cause container failure.
4. **Inadequate Ventilation:** Turmoil of toxic fumes in poorly ventilated areas can poison workers and contaminate environments.
5. **Improper Marking or Labelling:** Unlabeled containers make it impossible to apply correct storage and handling protocols.
6. **Structural Load Errors:** Overloading shelves or storage racks with heavy goods increases the risk of collapses.
7. **Fire & Explosion Hazards:** Flammable gases or chemicals can ignite from heat, static, or sparks if stored unsafely.

STATS

- In 2024, OSHA recorded 5,190 workplace fatalities, with transportation and warehousing accounting for 14% (726 cases). Hazardous materials storage incidents (e.g., fires, gas leaks) contributed to 4% of fatalities, highlighting 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 in storage areas. Respiratory Protection (29 CFR 1910.134) violations ranked 4th (2,800 citations), often due to improper respirator use during inspections.

- A 2022 NIOSH study found that 28% of workers in hazardous materials storage lacked proper PPE, increasing risks of burns, dermatitis, or respiratory issues from leaks or poor ventilation.
- WorkSafeBC reported 10–15 annual fatalities in transportation and warehousing in British Columbia (2020–2023), with 8% involving hazardous materials storage (e.g., gas leaks, fires). Proper PPE and training could mitigate these risks.
- CCOHS 2023 data showed that workplaces enforcing chemical-resistant PPE and respirators reduced storage-related injuries by 20%, particularly during inspections or spill response.
- In 2024, Ontario introduced fines up to $500,000 for repeat OHS violations, including PPE non-compliance, impacting firms storing dangerous goods without proper safety gear.