
Transportation of Dangerous Goods (TDG) Spill Response and Containment

1.0 Objective & Intent

The objective of this SOP is to establish a standardized, safe, and effective procedure for responding to and containing spills of dangerous goods during transportation within the facility. This procedure is designed to minimize risk to personnel, the environment, and property, and to ensure full compliance with the Transportation of Dangerous Goods (TDG) Regulations under Transport Canada and WorkSafeBC requirements. The specific risk mitigated includes uncontrolled release of hazardous substances that could lead to chemical exposure, fire, explosion, or environmental contamination.

2.0 Operational Scope

This procedure applies to all personnel involved in the receipt, handling, transport, and storage of dangerous goods within the cabinet and millwork manufacturing facility. It covers all areas where dangerous goods are moved, including loading docks, warehouse aisles, production floor pathways, and storage areas. This includes all employees, contractors, and visitors who may be exposed to or respond to a spill of dangerous goods classified under TDG regulations.

3.0 Hazard Identification & Mandatory PPE

- Chemical Exposure: Inhalation, skin contact, or ingestion of hazardous substances (e.g., solvents, adhesives, paints, flammable liquids).
- Fire and Explosion: Flammable or combustible liquids and gases can ignite from sparks, static electricity, or open flames.
- Slip, Trip, and Fall: Spilled liquids create slippery surfaces; debris from containers can cause tripping hazards.
- Environmental Contamination: Spills entering drains, soil, or water sources can cause regulatory violations and ecological damage.
- CSA-Approved Steel Toed Boots with chemical-resistant soles
- Chemical-Resistant Gloves (e.g., nitrile or neoprene, rated for the specific dangerous goods)
- Safety Glasses or Chemical Splash Goggles
- Chemical-Resistant Coverall or Apron
- Respiratory Protection: Half-face or full-face respirator with appropriate cartridges (e.g., organic vapor) if airborne contaminants are present or if ventilation is inadequate

4.0 Required Safety Equipment & Tools

- TDG Spill Kit (compatible with the types of dangerous goods on site, e.g., universal, oil-only, or chemical-specific absorbents)
- Personal Protective Equipment (PPE) as listed in Section 3.0
- Emergency Eyewash Station and Safety Shower (accessible within 10 seconds of the spill area)
- Fire Extinguisher (appropriate class for the dangerous goods, e.g., Class B for flammable liquids)
- Warning Signs and Barricade Tape (to isolate the spill area)
- Communication Device (two-way radio or phone) to alert emergency response team

- Safety Data Sheets (SDS) for all dangerous goods on site (accessible in digital or printed form)
- Absorbent Socks, Pads, and Pillows
- Plastic Bags and Containers for waste disposal (labeled for hazardous waste)
- Non-Sparking Tools (e.g., plastic scoop, shovel) for cleanup

5.0 Step-by-Step Safety Procedure

1. Assess the situation from a safe distance. Identify the dangerous goods involved by reading the TDG placard, shipping document, or SDS. Determine the spill size, hazards (flammability, toxicity, reactivity), and if anyone is injured or exposed.
2. Evacuate all non-essential personnel from the immediate area. Establish a danger zone of at least 10 meters (or as per SDS recommendations) and set up barricade tape and warning signs to prevent entry.
3. If the spill involves flammable or reactive materials, eliminate all ignition sources. Turn off nearby machinery, avoid using electrical switches, and do not operate vehicles or equipment that could create sparks. Use non-sparking tools for any actions.
4. Don the required PPE as specified in Section 3.0. Ensure respiratory protection is worn if airborne contaminants are present or if ventilation is insufficient. Verify that the PPE is compatible with the specific dangerous goods.
5. Contain the spill to prevent spread. Use absorbent socks or booms to create a barrier around the spill, especially near drains, floor cracks, or doorways. If the spill is on a permeable surface, cover with absorbent pads immediately.
6. Apply absorbent materials (pads, pillows, or loose absorbent) to the spilled liquid starting from the outer edges and working inward. Allow sufficient contact time for absorption as per the spill kit instructions. For solid spills, carefully scoop up the material using non-sparking tools and place in a labeled hazardous waste container.
7. Collect all contaminated absorbents, tools, and PPE in designated hazardous waste bags or containers. Seal and label each container with the contents, hazard class, and date. Do not mix incompatible wastes.
8. Decontaminate the spill area using appropriate cleaning agents (e.g., water and detergent for non-reactive spills) and absorbent pads. Collect all wash water and residues as hazardous waste. Dispose of all waste in accordance with TDG and environmental regulations.
9. Complete a Spill Incident Report detailing the date, time, location, substance involved, quantity, response actions, personnel involved, and any injuries or environmental impact. Report the spill to the facility safety officer and, if required, to WorkSafeBC and Transport Canada (e.g., for spills exceeding reportable quantities).
10. Restock the spill kit with new absorbents and PPE. Conduct a post-incident review with the response team to identify root causes and implement corrective actions to prevent recurrence. Update the TDG emergency response plan if necessary.

Regulatory Disclaimer: This document is a generic safety template provided for educational and informational purposes only. It does not constitute professional engineering, legal, or regulatory compliance advice. The end-user assumes all liability for validating all safety protocols against specific machinery manufacturer manuals and local occupational health and safety regulations (e.g., WorkSafeBC, CSA standards) before deployment.