

# Transportation of Dangerous Goods (TDG) Hazmat Loading Protocol

## 1.0 Objective & Intent

This SOP establishes the mandatory safety protocols for loading dangerous goods (hazmat) onto transport vehicles at our cabinet and millwork manufacturing facility. The primary objective is to prevent spills, leaks, fires, and exposure incidents during loading operations, ensuring full compliance with Transport Canada's Transportation of Dangerous Goods (TDG) Regulations and WorkSafeBC requirements. This procedure mitigates the risk of chemical exposure, environmental contamination, and regulatory penalties.

## 2.0 Operational Scope

This procedure applies to all personnel involved in the loading of dangerous goods, including but not limited to: finishing chemicals (solvents, lacquers, stains, thinners), adhesives (contact cement, epoxy hardeners), and compressed gases (propane, aerosol cans). It covers all loading docks, warehouse staging areas, and transport vehicles used for outbound shipments. All employees handling, loading, or supervising the loading of dangerous goods must follow this protocol.

## 3.0 Hazard Identification & Mandatory PPE

- Chemical Exposure: Inhalation of solvent vapours, skin contact with corrosive or flammable liquids.
- Fire and Explosion: Flammable vapours from solvents, lacquers, and thinners; ignition sources from static discharge or equipment.
- Spills and Leaks: Container damage during loading, improper securing leading to tipping or rupture.
- Manual Handling Injuries: Lifting heavy drums or pails, awkward postures, slips on wet surfaces.
- CSA-Approved Steel Toed Boots with puncture-resistant soles.
- Chemical-Resistant Gloves (e.g., nitrile or neoprene) rated for the specific chemicals being loaded.
- Safety Glasses or Chemical Splash Goggles (full-face shield recommended for bulk loading).
- Flame-Resistant (FR) Coveralls or Lab Coat when loading flammable liquids.
- Hard Hat if loading overhead or near overhead hazards.

## 4.0 Required Safety Equipment & Tools

- Spill Kit (universal or chemical-specific) with absorbent pads, socks, and disposal bags.
- Portable Fire Extinguisher (Class B rated for flammable liquids) within 10 metres of loading area.
- Lockout/Tagout (LOTO) Kit with personal lock and hasp for any powered loading equipment (e.g., forklift, pallet jack).
- Grounding and Bonding Cables for flammable liquid transfers (e.g., from bulk containers to smaller drums).
- Drum Dolly or Forklift with drum attachment for moving heavy containers.
- Secondary Containment Pallets or Drip Trays for staging and loading.
- TDG Placards and Labels (as per shipping documentation).
- Shipping Documentation (TDG manifest, safety data sheets).

## 5.0 Step-by-Step Safety Procedure

1. Verify that all personnel involved have completed TDG training (valid certificate) and are familiar with the specific dangerous goods being loaded. Review the shipping manifest and safety data sheets (SDS) for each product.
2. Inspect the loading area for cleanliness, adequate lighting, and absence of ignition sources (e.g., open flames, sparks, ungrounded equipment). Ensure all required safety equipment (spill kit, fire extinguisher, grounding cables) is present and accessible.
3. Don all mandatory PPE as listed in Section 3.0. Perform a pre-loading inspection of containers: check for leaks, dents, corrosion, or damaged labels. Reject any container that is compromised.
4. If loading flammable liquids from bulk containers, attach grounding and bonding cables to the container and the receiving vessel before any transfer. Verify continuity with a multimeter if available.
5. Position the transport vehicle at the loading dock and engage wheel chocks. Ensure the vehicle's engine is off and the parking brake is set. For powered loading equipment (forklift), perform a pre-use inspection and apply LOTO if any maintenance is required.
6. Load dangerous goods onto the vehicle using appropriate mechanical aids (drum dolly, forklift with drum attachment). Never manually lift containers exceeding 25 kg. Secure each container to prevent movement during transit using straps, dunnage, or blocking. Do not stack incompatible materials (e.g., oxidizers with flammables).
7. After loading, inspect the vehicle's cargo area for any spills or leaks. If a spill occurs, immediately stop loading, evacuate the area if necessary, and deploy the spill kit. Clean up per the SDS and report the incident to the supervisor.
8. Affix the correct TDG placards to the vehicle as per the shipping manifest. Ensure placards are visible, clean, and securely attached. Complete and sign the shipping document (bill of lading) and provide a copy to the driver.
9. Remove all grounding and bonding cables, secondary containment, and any tools from the loading area. Conduct a final walk-around of the vehicle to confirm all doors are closed and secured, and no hazards remain.
10. Document the loading operation in the SafeDesk digital log, including the date, time, product names, quantities, vehicle information, and any incidents or deviations. Report any safety concerns or equipment issues immediately to the safety officer.

**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.