
Glass and Brittle Plastic Breakage Cleanup and Quarantine Protocol

1.0 Objective & Intent

The objective of this SOP is to establish a standardized, safe procedure for the immediate cleanup, disposal, and quarantine of broken glass and brittle plastic materials within the cabinet and millwork manufacturing facility. This protocol is designed to prevent laceration injuries, eye injuries, and contamination of work areas and materials, ensuring compliance with WorkSafeBC regulations regarding hazardous waste and sharps disposal.

This SOP mitigates the specific risks associated with sharp shards, splinters, and airborne particles generated during breakage of glass panels, mirrors, acrylic sheets, polycarbonate, and other brittle plastics used in cabinet doors, shelving, and decorative elements. Failure to follow this protocol can lead to severe cuts, embedded foreign bodies, and cross-contamination of finished products.

2.0 Operational Scope

This procedure applies to all maintenance personnel, production operators, material handlers, and cleanup crews working in the cabinet assembly, glass cutting, plastic fabrication, and finishing departments. It covers all breakage events involving glass (tempered, laminated, annealed) and brittle plastics (acrylic, polycarbonate, styrene, ABS) in sheet, panel, or formed part form.

The protocol is activated immediately upon discovery or occurrence of any breakage, regardless of size, and remains in effect until the affected area is fully cleaned, inspected, and released for normal operations. It does not apply to routine disposal of intact scrap materials.

3.0 Hazard Identification & Mandatory PPE

- Sharp Edges and Shards: Risk of deep lacerations to hands, arms, and legs from broken glass or plastic fragments.
- Airborne Particles and Splinters: Risk of eye injury from flying glass dust or plastic splinters during cleanup.
- Embedded Foreign Bodies: Risk of small fragments becoming embedded in skin or clothing, causing infection.
- Slip/Trip Hazards: Broken pieces on floors create unstable walking surfaces and potential falls.
- Chemical Exposure: Some brittle plastics may release fumes if heated or cut; ensure no cutting or grinding during cleanup.
- CSA-Approved Safety Glasses with side shields (mandatory for all personnel in the cleanup zone).
- Cut-Resistant Gloves (ANSI A4 or higher) – heavy-duty, not standard work gloves.
- Steel-Toed Safety Boots with slip-resistant soles.
- Long-Sleeve Work Shirt and Full-Length Pants (no exposed skin).
- Face Shield (for any cleanup involving overhead or large panels).
- Disposable Coveralls (optional but recommended for large breakage events to prevent contamination of clothing).

4.0 Required Safety Equipment & Tools

- Heavy-Duty Push Broom and Dustpan (dedicated for glass/plastic cleanup, not shared with other debris).

- Industrial Vacuum with HEPA filter (for fine particles and dust).
- Sharps Disposal Container (rigid, puncture-proof, labeled for glass/plastic shards).
- Heavy-Duty Cardboard Boxes or Plastic Totes with lids (for larger fragments).
- Duct Tape or Packaging Tape (to seal boxes and secure loose shards).
- Warning Signs or Barricade Tape (to cordon off the affected area).
- First Aid Kit (with antiseptic, bandages, and eye wash station nearby).
- Disposable Gloves (for handling contaminated materials after initial cleanup).
- Quarantine Labels (bright red or orange, with date, time, and 'BROKEN MATERIAL – DO NOT USE' text).

5.0 Step-by-Step Safety Procedure

1. Immediately stop all work in the immediate vicinity of the breakage. Verbally alert nearby personnel to stay clear. Do not attempt to touch or move broken pieces with bare hands.
2. Cordon off the affected area using warning signs and barricade tape. Establish a minimum exclusion zone of 3 meters (10 feet) around the debris field. Ensure no one enters the zone without proper PPE.
3. Don all required PPE as listed in Section 3.0. Verify that cut-resistant gloves are properly fitted and free of damage. Perform a buddy check to ensure no skin is exposed.
4. Using the push broom and dustpan, carefully sweep large fragments into a pile. Do not use compressed air or water to move debris, as this can create airborne hazards. Place fragments directly into the heavy-duty cardboard box or plastic tote.
5. For fine particles and dust, use the HEPA-filtered industrial vacuum to clean the entire exclusion zone. Vacuum in overlapping passes, paying special attention to cracks, corners, and under machinery. Do not use a standard shop vacuum without a HEPA filter.
6. Inspect the cleaned area visually and by hand (wearing cut-resistant gloves) for any remaining small shards or splinters. Use a flashlight at a low angle to reveal transparent fragments. Repeat vacuuming if any debris is found.
7. Seal the container holding the broken material with duct tape. Affix a quarantine label to the container, clearly indicating the date, time, and material type. Move the sealed container to the designated hazardous waste holding area, away from production lines.
8. Remove and dispose of disposable coveralls and gloves in a separate waste bag. Wash hands and forearms thoroughly with soap and water. Inspect clothing for any embedded fragments before leaving the area.
9. Remove the barricade and signs only after a final inspection by a supervisor or safety representative confirms the area is free of debris. Document the incident in the safety logbook, including time, location, material type, and any injuries.
10. Quarantine any adjacent materials or finished products that may have been contaminated by splinters or dust. Label them with quarantine tags and segregate them for inspection before they can be returned to production or shipped.

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.