

SAFETY ALERT

Working with sheet materials

The purpose of this alert is to provide information about hazards and the potential for serious injury when storing or handling sheet materials that are stacked on their edges.

Background

A worker received fatal injuries while unpacking glass sheets from a timber crate. Workers had removed the top and front of the crate, and were in the process of lifting the sheets from the crate onto a transport truck. After unloading approximately half of the crate, the remaining sheets became unstable and toppled, crushing the worker against the truck.

Contributing factors

Investigations are continuing; however, a number of factors may have contributed to the incident.

- The crate that toppled was stored upright on the factory floor, not placed on an A-frame prior to opening.
- The factory had A-frames; however the design only held one crate on each side. The usual storage method at the site was to successively lean additional crates against the crate in the A-frame and then chock the bottoms with timber. In this manner, up to six additional crates would be leaning against a crate in an A-frame.
- The crate that toppled was not stored in this manner, but was leant against the ends of one such arrangement. An attempt to keep the crate on a lean while unloading sheets was made using timber chocks.
- There was limited space in the factory, and the layout at the time hindered movement around the crate and the truck.

Action required

The incident involved glass handling; however, the following is also applicable to other sheet materials that are stored upright on an edge. Hazards associated with the handling and storage of sheets may arise from:

- the work practices and systems of work in use, including manual handling
- the plant and equipment used to transport, handle and store the sheets or crates
- the layout and condition of the place of work.

When storing sheet materials, consider the following

- Store the sheets or crates on a lean on an A-frame or other purpose-designed racking that can support the material in a stable manner (a lean of 3-6° from the vertical is commonly recommended, and 5-6° is recommended for transportable racks, pallets and stillages).
- Once stored, use appropriate restraints to retain sheets or crates in position and prevent later movement due to wind, impact or other actions.
- Do not overload frames or racking.
- Ensure supporting surfaces are level and strong enough to sustain the load of the frame, racking, crate or sheets.
- If using chocks under crates, they should extend the full depth of the crate. Be aware that chocks can result in concentrated loads on both the crate and the supporting surface.

- Ensure storage areas have adequate clearance to allow access for workers and lifting equipment. Storage areas should not be used to unload individual sheets unless the layout, access, equipment used and safe work procedures allow it.
- Ensure workers are adequately trained in systems of work for the storage of sheet materials.

When unpacking sheet materials from crates, consider the following

- Before unpacking crates, position them on a lean (3-6° is recommended). This could be done using an A-frame or other appropriately designed structure.
- If the crate is providing support to sheets on a lean, be aware that removing tops, sides or ends of the crate can weaken it.
- Be aware of possible movement inside crates and containers as a result of transport.
- Be aware of recoil when releasing straps used to strap crates or bundle sheets of material together.
- Some materials may stick together when bundled due to friction or suction between the sheets. However, if straps are loosened/removed or the seal is broken individual sheets may still slip.
- Use appropriate lifting equipment when handling sheets. Do not exceed the working load limit of any lifting device.
- Remain clear of hazard (fall) zones when lifting and handling sheets.
- Ensure that workers are adequately trained and supervised for the tasks they are performing.
- Ensure that working areas are well lit and have adequate space for the tasks being undertaken.
- Use appropriate personal protective equipment (PPE) (eg gloves).

Further information

The *Work Health and Safety Act 2011* (WHS Act) requires persons in control of a business or undertaking at a workplace to ensure, so far as is reasonably practicable, that workers and other persons at a workplace are not exposed to risks arising from the business or undertaking and that all staff are adequately trained and supervised.

Clauses 34 to 36 of the *Work Health and Safety Regulation 2011* (WHS Regulation) places specific obligations on duty holders to identify reasonably foreseeable hazards that are associated with work being undertaken, and then to manage those risks accordingly.

- Safety alert – *Storage and handling of glass sheets* (catalogue no. WC05346)
- Safety alert – *Storage and handling of sheet materials*
deir.qld.gov.au/workplace/resources/pdfs/alert-storage-handling-sheetmaterials.pdf
- Poster – *Handling glass safely* (catalogue no. WC06032)
- *Glazing and glass federation code of practice – Glass handling, storage and transport*
ggf.org.uk/publication/ggf_code_of_practice_for_glass_handling_and_storage
- New South Wales Glass and Glazing Association – nswgga.org.au/
- workcover.nsw.gov.au or phone 13 10 50

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Information on the latest laws can be checked by visiting the NSW legislation website (www.legislation.nsw.gov.au).

This publication does not represent a comprehensive statement of the law as it applies to particular problems or to individuals or as a substitute for legal advice. You should seek independent legal advice if you need assistance on the application of the law to your situation.

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