



GUIDE FOR UNPACKING SHIPPING CONTAINERS

SAFEWORK NSW

OCTOBER 2016

Disclaimer

This publication may contain information about the regulation and enforcement of work health and safety in NSW. It may include some of your obligations under some of the legislation that SafeWork NSW administers. To ensure you comply with your legal obligations you must refer to the appropriate legislation.

Information on the latest laws can be checked by visiting the NSW legislation website www.legislation.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.

This material may be displayed, printed and reproduced without amendment for personal, in-house or non-commercial use.

Catalogue No. SW08344

SafeWork NSW, 92-100 Donnison Street, Gosford NSW 2250

Locked Bag 2906, Lisarow NSW 2252 | Customer Service Centre 13 10 50

Website www.safework.nsw.gov.au

ISBN 978 1 74341 383 8 © Copyright SafeWork NSW 1117

CONTENTS

Introduction	4
Risk management	5
Key principles for safe unpacking	5
Packing by the supplier	6
Placement of the container for unloading	7
What is the issue?	7
How can I manage this?	7
Before opening the container	8
What is the issue?	8
How can I manage this?	8
Before you unpack the container	9
What is the issue?	9
How can I manage this?	9
Unpacking	10
What is the issue?	10
How can I manage this?	10
More information	12
Acknowledgements	13

INTRODUCTION

This guide provides you with information on how to manage health and safety risks when unpacking containers transported by land or sea. From the opening of the container doors, through to removing and transporting items to the storage location – the guide covers your obligations under work health and safety legislation.

The key hazards associated with unpacking shipping containers include:

- containers placed on sloping or uneven ground
- inadequate lighting to allow safe unpacking of the container contents
- loose items due to inadequate securing to prevent movement during transport
- items not packed for easy unpacking, not on pallets or slip sheets
- loose items falling from a height
- items that can come loose during transport forcing the doors open or falling on workers when the door is first opened
- unsafe systems employed to unpack containers, such as:
 - selecting unsuitable straps, chains or restraints or using them incorrectly
 - incorrectly using plant to unpack the container, for example, using a forklift not designed to tow to drag items out of container
 - overloading plant, and not taking the rated capacities of attachments into consideration
 - having people working in and around the container and being hit by mobile plant used for removing items
 - not providing information about the items being handled, such as the item's weight or whether it is hazardous
 - ignoring potential risk of exposure to chemicals used for fumigation of the container
 - conducting manual tasks that require lifting heavy items, bulky items or situations which require the worker to use awkward postures
 - ignoring the risk of slips, trips and falls
 - not being aware of how to manage chemical spillage inside the container.

This guide does not address the loading of containers, related traffic management, handling dangerous goods in containers and packing items into containers. For details of these topics refer to *More information* chapter of this document.

This publication is for all those legally responsible for health and safety when unpacking shipping containers. Those with legal duties include employers, contractors, labour hire agencies, freight forwarders, consignors, customers and employees. For details of these legal duties refer to *More information* chapter of this document.

RISK MANAGEMENT

A safe and healthy workplace does not happen by chance or guesswork. You have to think about what could go wrong at your workplace and what the consequences could be. Then you must do whatever is reasonably practicable to eliminate or minimise health and safety risks arising from your business or undertaking.

To manage risks, you must first identify all potential hazards associated with unpacking shipping containers, assess them where necessary, and then eliminate the hazards so far as is reasonably practicable. If it is not reasonably practicable to eliminate this hazard, the risk must be controlled in accordance with the 'hierarchy of controls'. The controls should be subject to the requirements of 'what is reasonably practicable'.

It is not always necessary to conduct an assessment, especially if the risks and effective control measures are already known. For example, choosing a forklift to remove pallet loads.

In deciding how to control risks you must consult your workers and their representatives who will be directly affected by this decision. Their experience will help you choose appropriate control measures and their involvement will increase the level of acceptance of any changes that may be needed to the way they do their work.

Review your control measures from time to time to ensure they are working as planned and remain relevant.

The items packed in containers vary significantly, small, large, heavy, light and bulky. Therefore, the management of associated risks also will vary from one container to another.

For details of risk management refer to the *More Information* chapter of this document.

KEY PRINCIPLES FOR SAFE UNPACKING

- Always establish a plan for safe unpacking before doing anything else.
- If the load has shifted or appears precarious or unsafe, don't enter the container.
- Never allow workers inside the container if there is any risk of objects moving and trapping them.
- Never allow workers inside the container if there is a chemical spill.
- Never allow people and mobile plant to operate inside containers at the same time.
- Avoid working alone inside containers.
- Continue to assess the load for risks as you unpack. If conditions change, don't risk it. Stop, conduct a risk assessment and replan the work taking all reasonable precautions.
- Never stand near a load that is unsecured. For example, sheet material on an A-frame.
- Where practicable, use mechanical aids over manual handling. For example, a conveyor.
- Ensure workers who are unpacking containers are trained, supervised and competent. This will help them to select the right work processes that have the lowest risk, choose appropriate equipment and know when to call for assistance if safety is unclear or jeopardised.
- Ask for help if you don't have the equipment or expertise to safely unpack a container. If necessary engage specialists to do the unpacking.
- Ensure workers wear appropriate PPE when emptying the container.

PACKING BY THE SUPPLIER

The best way to plan for safe unpacking is to work with the supplier to ensure:

- the load is packed to prevent or minimise items becoming loose or unstable during transport. This may be achieved by placing them on racks, crates, wrapping, strapping or a combination of these
- goods are packed on pallets or slip-sheets to enable the use of a forklift to unload. Bulk bags may also be appropriate
- each load of sheet material is individually secured on an A-Frame.

If you have the facilities to unpack containers from the top, ask your supplier to use open top containers to avoid entering the container for unpacking.

Using containers that allow access from both ends will also help you to avoid entering the container and enable the use of dual lifts to remove bulky or long items.

Ask your supplier for a packing plan that includes a list of items, the weights of items, where items are placed in the container and how the items are restrained. This information will help you develop a safe system of work for unpacking prior to the container arriving on site.

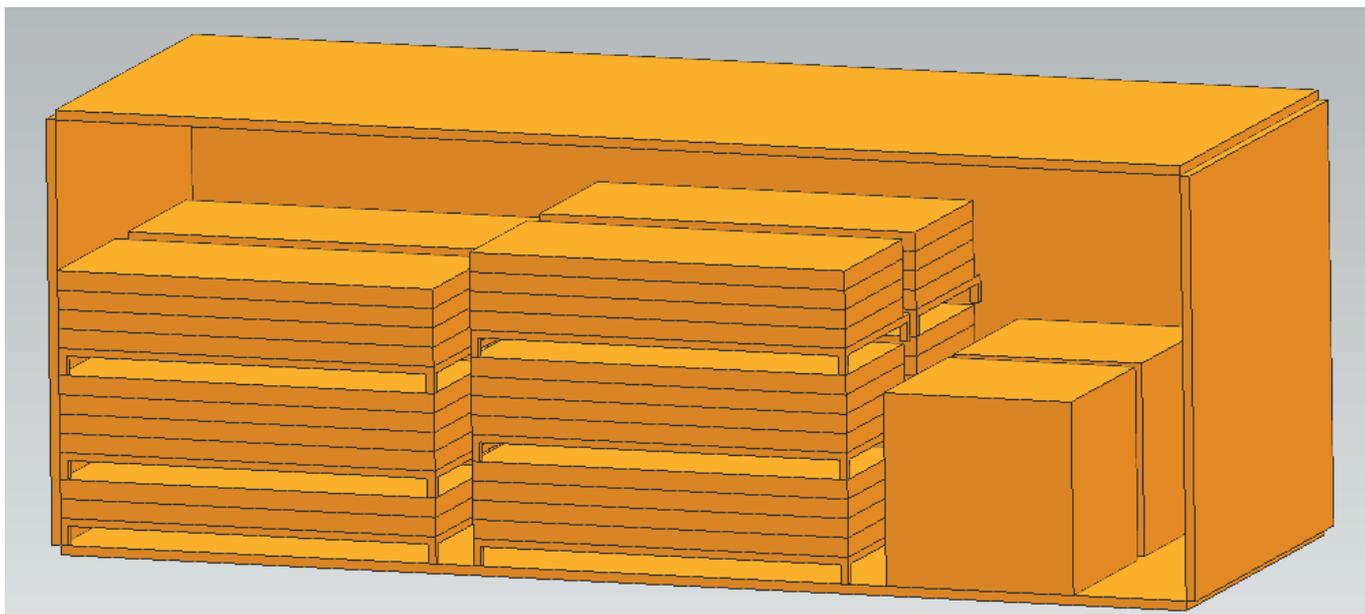


Figure 1: Example of a packing plan showing where items are placed in the container.

PLACEMENT OF THE CONTAINER FOR UNLOADING

WHAT IS THE ISSUE?

Placement of a container in an inadequate location onsite can lead to a number of risks including:

- electrocution
- slips, trips and falls
- falls from height
- collision of people and plant
- physical fatigue
- musculoskeletal disorders
- risk of being hit by unrestrained items or falling loads.

HOW CAN I MANAGE THIS?

The risk of injuries arising from the placement of the container can be eliminated or significantly reduced by:

- consulting with workers who will be unpacking the container
- consulting with other site users prior to placement of the container on common property

- considering the proposed container site prior to its arrival, including the path of navigation to its resting place. For example, are there obstacles, overhead power lines or any other dangers?
- selecting a suitable area for unpacking on level undamaged ground with sufficient space to open doors and provide safe access
- paying close attention to the stability of the container if it is positioned at a height to access a loading dock. You should consider lowering the landing leg of the trailer to sure this up
- ensuring the site has adequate space to operate plant in and around the container and to set down a load outside of the container (this should be considered in your Traffic Management Plan)
- ensuring there is sufficient lighting in and around the container for unpacking and operating plant
- considering the environmental conditions of the site, for example, heat, rain and ventilation; and the appropriateness for workers unpacking in these conditions.



Figure 2: Ensure the container is placed on even ground.

BEFORE OPENING THE CONTAINER

WHAT IS THE ISSUE?

Loads within a container often shift during transportation or may move as a result of inadequate packing. Goods may be pushing against container doors. This can lead to uncontrolled opening of the doors. Workers are at risk of being hit by unrestrained items or falling loads.

HOW CAN I MANAGE THIS?

The risk of injuries arising from the opening the container can be eliminated or significantly reduced by:

- never assuming the load is secured in a safe manner when you are opening a container door
- using a suitable restraint, such as a short rope, net or barrier, on the door to prevent the items resting on the doors from forcing the doors open without a control in place
- opening the right hand door cautiously first, only when safe, proceed with the left
- checking to see if the goods have shifted when the doors are partially opened
- consulting with workers to develop and implement a safe method of unpacking (using a safe work method statement) if the goods have shifted
- checking for any notices or labels (such as dangerous goods labels), or notices concerning the contents.

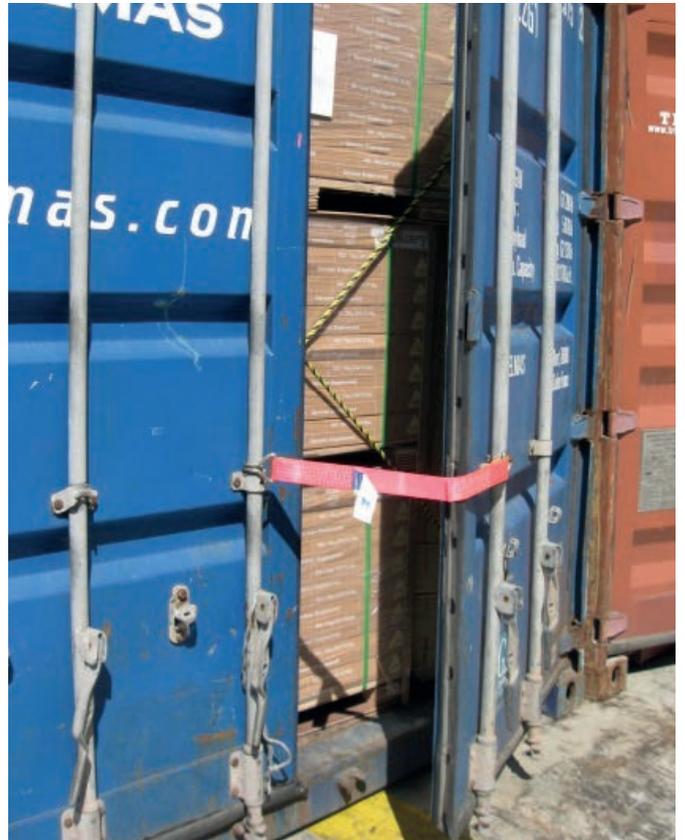


Figure 3: Use restraints to ensure doors can be opened safely.

BEFORE YOU UNPACK THE CONTAINER

WHAT IS THE ISSUE?

Unpacking without a plan may lead to an unsystematic, adhoc approach. This can ultimately expose your workers to risks.

HOW CAN I MANAGE THIS?

The risk of injuries arising from the opening of the container can be eliminated or significantly reduced by:

- planning the order in which the items should be removed to avoid remaining items becoming unstable and falling
- determining the number of workers required to safely unpack the container
- determining the appropriate equipment to unpack the load safely. This might include, but is not limited to, plant, conveyors and personal protective equipment (PPE)
- considering the placement of the container, the movement of plant into and out of the container, and the placement of load you are unpacking when outside of the container
- considering risks that may arise during unpacking, and ways to minimise risks by including control measures to either prevent or manage hazards.



Figure 4: Bulky items packed using crates, wrapping, dunnage bags and strapping.

UNPACKING

WHAT IS THE ISSUE?

Workers are at risk when they are unpacking heavy, awkward and unsecured items.

The systems used to unpack containers may include the manual handling of goods. This can involve heavy lifting, using awkward postures and spending long periods of time doing the same movements. Mobile plant can be used to eliminate the need to complete hazardous manual tasks.

All of these can pose a range of risks to worker including:

- people being hit by unrestrained items or falling loads
- people being hit by mobile plant such as forklifts
- musculoskeletal injuries, such as sprains and strains
- slips, trips and falls when manually handling a heavy and awkward object. Reaching those objects is also a risk.

HOW CAN I MANAGE THIS?

The risk of injuries arising from unpacking shipping containers can be eliminated or significantly reduced by:

- only removing the restraints of the item to be immediately removed.
- bracing items temporarily with suitably rated restraint devices such as props, braces or frames where there is a risk of the items falling
- keeping the area around the container clear of obstructions
- having an appropriate traffic management plan in place
- reducing manual handling by using mechanical loading and unloading systems. This can include:
 - unloading with powered mechanical aids such as a forklift or electric pallet truck if the load was packed using bulk bags, pallets or slip sheets
 - packing small items on a pallet to be removed using a pallet truck or a forklift.
- If manual unpacking is necessary you should:
 - train workers in the safest system of work to unload the container
 - ensure goods are handled between the knee and shoulder height by using pallet jacks, pallet rollers, trolleys or adjustable conveyers.
- using PPE such as gloves, hard hats, safety glasses, and hi-visibility clothing
- unloading with mobile plant. When doing so, you should:
 - ensure appropriate traffic management measures are in place to separate people and plant
 - use a crane or forklift with attachments such as grabs, spikes or slippers
 - use a tag line to guide loads being lifted using a crane – to keep away from the load

- ensure the attachments and slings are inspected and maintained
- ensure the ratings of any plant using attachments, such as fork tyne slippers, are known to avoid overloading.
- taking extra care when unpacking sheet material, such as glass sheet, panels, stone sheets, and composite slabs. You can do this by:
 - strapping items to an 'A' frame or to the side of the container. Securing each sheet using a separate strap means workers can only release the sheet that is being removed - one at a time
 - using mechanical aids to eliminate the need to manually handle goods
 - ensuring individual sheets are secured as you unpack
 - unpacking only in a designated area
 - ensuring the load is secured in its final destination.



Figure 5: Stack boxes onto pallets for removal by forklift truck.



Figure 6: Using a manually operated conveyor.



Figure 7: Using suitable equipment to unload such as a fork lift truck with grabs.

MORE INFORMATION

For more detailed information about how to stay safe while unpacking shipping containers, call 13 10 50 or visit www.safework.nsw.gov.au. A list of useful publication is also outlined below.

WHS LEGAL DUTIES

The *Guide to the Model Work Health & Safety Act* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – provides an overview of the Work Health and Safety Act (WHS Act) to help people generally understand their health and safety duties and rights at work. This includes guidance on the obligations of an employer, business, worker, visitor, designers, manufacturers, importers and suppliers pages. Refer to pages 7-11.

RISK MANAGEMENT

The *Model Code of Practice: How to manage work health and safety risks* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – provides information on identifying hazards, assessing and controlling risks, reviewing controls and keeping records.

TRAFFIC MANAGEMENT

The *General guide for workplace traffic management* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – provides advice for small businesses and workers on managing traffic risks in the workplace. This guidance includes the *Traffic management: Guide for warehousing*, and a *Traffic hazard checklist* that provides information on what to look for and how manage risks that may arise from traffic movements in warehouses.

MANUAL TASKS

The *Model Code of Practice: Hazardous manual tasks* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – shows you how to manage the risk of musculoskeletal disorders arising from hazardous manual tasks.

RESIDUAL CHEMICALS IN SHIPPING CONTAINERS

In 2011 Safe Work Australia commissioned a project to investigate worker exposures when unpacking shipping containers at retail warehouse or distribution centres. While findings cannot be generalised, a report; *Hazard surveillance: Residual chemicals in shipping containers* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – provides indicative results for workers who unpack shipping containers.

WORKING ON OR NEXT OVERHEAD POWERLINES

The *Work near overhead power lines: Code of Practice* (located on the SafeWork NSW website www.safework.nsw.gov.au) – shows you how to manage the risks arising when working near overhead power lines.

FALLS

The *Model Code of Practice: Managing the risk of falls at workplaces* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – provides information about managing the risk of falls, working on the ground and from a solid construction, fall prevention devices, work positioning systems, fall-arrest systems, ladders, administrative controls, emergency procedures, and the design of plant and structures.

WORKING ALONE

The *Model Code of Practice: Managing the work environment and facilities* (located on the SafeWork Australia website www.safeworkaustralia.gov.au) – provides advice on working in isolation.

ACKNOWLEDGEMENTS

SafeWork NSW would like to acknowledge the following stakeholders for their invaluable contribution to this initiative:

- Container Transport Alliance Australia
- Young Guns Container Crew
- Supply Chain & Logistics Association of Australia (SCLAA)
- Mendizabal Container Solutions
- Freight and Trade Alliance (FTA Alliance)
- 3rd Party Containers
- Royal Wolf
- Containertech
- Toll Logistics
- Bunnings

GLOSSARY

Container	Also referred to as shipping containers, they are a steel or aluminium frame forming a box in which cargo can be stowed for the transport of items by road, rail or sea. They are fitted with special castings on the corners for securing to lifting equipment, vessels, chassis, rail cars, or stacking on other containers. Containers come in many forms and types, including ventilated, insulated, refrigerated, flat rack, vehicle rack, open top, bulk liquid, dry bulk, or other special configurations. Typical containers may be 10 feet, 20 feet, 30 feet, 40 feet, 45 feet, 48 feet, or 53 feet in length. They can be 8 feet or 8.5 feet in width, and 8.5 feet or 9.5 feet in height.
Dunnage	Material used in stowing cargo, either for separation or the prevention of damage. This includes wooden dunnage, beams, planks, boards, wedges, plywood and hardboards, walking boards, mats and paper. It can also include sailcloth, canvas and tarpaulins; plastic and metal sheets, spray covers; cardboard and paperboard, and packing paper.
Forwarder	Also known as a Freight Forwarder. This is a person or company who arranges for the carriage of goods and associated formalities on behalf of a shipper. The duties of a forwarder include booking space on a ship, providing all the necessary documentation, and arranging customs clearance.
Intermodul	The movement of containers between transport modes.
Loading/unloading	The movement of the container during transportation.
Packing	The process of filling the contents of a shipping container. This can also be referred to as stuffing.
Slip-sheet	A corrugated, solid fibre or plastic sheet that sits between stacks of shrink wrapped product. Each sheet has one to four tabs that run the length of the sheet and extend past the load and fold up to allow for grabbing by push/pull attachments. Unlike pallets, slip sheets use little storage space in the container or truck and allow the same amount of product to be stored as if it was stacked by hand.
Unpacking	The process of emptying the contents of a shipping container. This can also be referred to as destuffing, stripping or de-vanning.

