

LOADING DOCKS AND WAREHOUSES

Introduction

Hazards for loading docks include making heavy or repeated lifts, working with dock, levelers and dock plates, as well as working near trailers that may tip over or separate from the dock.

Other possible hazards include: strapping, poor maintenance of rubber wheels, improper shrink wrapping and assembly of loads, congested docks, poor weather conditions, chemical exposure or leaking chemicals

Hazard: Shrink Wrapping and Improper Assembly of Loads

Details

- Wrapping loads by hand requires you to use poor body mechanics and circle the load many times. This can also cause dizziness and cause you to stray into oncoming equipment and traffic
- Poorly constructed loads on pallets can collapse, creating lifting hazards or falling on delivery staff or pedestrians

Threat

- Low back injury
- Wrist and muscle strain
- Possible injury to your shoulders and upper back
- Crush injury, bruising or broken bones

Safe Work Guidelines

- Whenever possible, use automated wrapping equipment
- If you must wrap by hand:



- use ergonomically correct tools, and
- rotate to other jobs so that you do not have to wrap too many loads on a shift
- Order shrink-wrap on spools that have a wide diameter and are light
- Wrap skids in one specific area and make sure that all equipment operators are aware of this area
- To reduce shoulder and upper back injury when you are wrapping make sure that skids are not built above shoulder height
- Alternate your wrapping direction and techniques
- Fill the hollow inside of loads with air pillows or used shrink-wrap
- If you are a driver use ergonomic lifting, pulling and reaching devices such as “lambs’ hooks”
- Make sure that you are trained in product integrity and how to build stable loads
- If possible, go out with the driver on a regular delivery, so that you will understand how the way you assemble orders can affect the drivers job

Hazard: Lifting Below the Knees and Above the Shoulders

Details

- Workers must keep bending forwards at the waist to put boxes on the lower levels of pallets
- Some loads come in too high and need to have the top rows removed to fit into bin bay
- Many times, receivers start to lift right after sitting on the forklift for long periods of time.
- Muscles tire quickly when you work in a fixed or awkward position, causing higher risk of injury

Threat

- Lower and upper back injuries
- Shoulder injuries
- Carpal tunnel syndrome
- Tennis elbow
- Shoulder bursitis

Safe Work Guidelines

- Make sure that you have had enough training on lifting hazards and proper lifting techniques
- Ask your employer for ergonomically designed tools to reduce the stress on your body
- Pay attention to the postures you use when working
- Whenever possible, rotate duties so that you can vary your postures
- Adjust the height of the forks to get your load to an ideal height
- Use a stable step stool or platform to reach high items and place extra product on raised skids
- Allow time to warm up your back muscles after sitting on the forklift and before hand-bombing
- Consider using forklift attachments like slip-sheet clamps or carton clamps



Hazard: Adding or Removing Strapping

Details

- Shippers often bundle or crate items with strapping. The strapping may break and cause injury, especially to the eye
- Loose strapping that has been cut off bundles becomes a tripping hazard

Threat

- Potential eye injury from broken strapping
- Bruises
- Broken bones

Safe Work Guidelines

When You Are Adding Strapping

- Use safety goggles and leather gloves
- With heavy strapping, use steel-reinforced glove
- Do not use more force to tighten straps than the machine is designed for
- To cut off excess strapping and sharp or pointed ends and remove any broken or damaged bands, use metal snips (cutters)

When You Are Working with Strapped Items

- Face in the direction of the pull
- Stay out of the direct line when the strap is under tension
- Do not lift a package by the strapping

Before You Cut The Strapping

- Anchor the closest end with a holding device
- Warn other workers, pick up your snips, turn your back to the strapping and stand out of the line of recoil
- Do not remove strapping by breaking it with a hammer, bar, chisel, or other tool

After You Cut The Strapping

- If the strapping is not made of metal, tie a knot in it
- If the strapping is metal, fold and flatten it
- Throw out waste strapping immediately so it does create a tripping hazard

Hazard: Chemical Exposure or Leaking Chemicals

Details

- Sealers are used as coatings to waterproof items for shipment

- Glues are used to seal containers and attach labels
- Sometimes leaks can develop in the load, causing hazardous chemicals to drain to the back of the truck
- Often quick-drying agents that foam are used to package products for shipment. Some of these agents contain Isocyanates, which are a designated substance in Ontario.
- If the agents are not used and maintained properly, workers may be exposed to the Isocyanates
- Isocyanates are also contained in some floor repair epoxies

Threat

- Permanent damage to the lining of your lungs and other parts of your respiratory system, allergies, asthma, damage to lungs, burns, irritation to your respiratory tract, skin, eyes
- Symptoms may include sore eyes, runny nose, sore throat, coughing, wheezing, tight chest, fever and breathlessness

Note: Once you are sensitized to Isocyanates, even limited exposure can cause severe breathing problems

Safe Work Guidelines

While You Are Choosing Chemical Products

- Whenever possible, use less harmful agents
- Use plastic sealers or cold asphalt compounds rather than pitch

While You Are Using Chemicals

- Check the MSDS for the specific hazards of the materials that you are using

- Work in a properly ventilated area – vented hoods or other local exhaust systems may be needed
- Use the recommended PPE, which may include:
 - Goggles and face masks (including the right filter cartridges)
 - Heat- and chemical- resistant gauntlet-style safety gloves
 - Heat and chemical-resistant full aprons
- When you are working with plastic or cold sealants, use the following personal protection
 - Splash-proof safety glasses
 - Chemical-resistant safety gloves
 - Arm and body protection
 - Full aprons
- Follow the maintenance procedures recommended by the manufacturer of the equipment that dispenses the agent
- Before unloading a trailer, confirm the contents with the driver’s waybills to ensure that any leaking product is not hazardous

Hazard: Poor Maintenance

Details

- Rubber wheels on pallet jacks and forklifts can develop flat spots, resulting in unstable loads and poor handling
- Having urethane wheels with the wrong density on pallet jacks or walkie stackers can place extra strain on the operator

Threat

- Stress on your hands and feet
- Excess strain on your muscles to move manual equipment
- Whole-body vibration or shock from driving powered equipment
- Bursitis

- Tennis elbow
- Wrist strain

Safe Work Guidelines

- Make sure that pallet jack and forklifts are maintained regularly to reduce the hand, arm and finger force you need to operate them
- Make sure that your employer has trained you to recognize and report the early signs of mechanical breakdown
- Make sure that floors are well maintained and clean
- After repairs are made, report any difficulties in steering equipment

Hazard: Dock Levellers and Portable Dock Plates

Details

- A lift truck may hit the dock leveler or its frame if the operator does not point the forks up while driving into the trailer
- The angle of the dock onto an air ride trailer may be too steep, causing the lift truck operator to lose control as the equipment ‘skis’ over the sharp angle
- Operators may receive repeated shocks to the spine when speeding over uneven (raised) dock plates
- Portable dock plates have to be lifted and may collapse if they are not secured
- Levellers may pop up too soon
- An unbalanced load or poor shock on the trailer may cause the leveler to lift up on one side, throwing the operator off the lifting equipment

Threat

- Concussion
- Bruises
- Back Strain
- Foot injuries

Safe Work Guidelines

- Make sure that the forks on your lift truck are always pointing up and that they are high enough to clear the dock plate or leveler
- Make sure that your lift truck is checked for hydraulic drift, which can cause forks to point down unexpectedly
- Make sure that air ride trailers are lowered to reduce the angle of the dock leveler
- Drive slowly over a dock plate or leveler
- Whenever possible, use a forklift to position portable dock plates
- Ensure that the dock plate is equipped with anchor stops and signs that indicate the size of load they can handle
- Make sure that dock levelers are fitted with skirt plates and toe guards so that your feet cannot be trapped
- Always look behind you that the path is clear
- Make sure that you report problems with levelers and ask for prompt servicing

Hazard: Dock Congestion and Separation from Dock

Details

- Lack of space, poor layout or standard procedures can cause dock areas to be very congested
- Congestion increases the chance of colliding with other equipment, racking or pedestrians



- Forklift operators may be tempted to drive over levelers, which can fail causing the machine to fall out of the building
- The force created every time a lift truck enters and leaves the trailer may cause the trailer to slowly move away (this is called trailer creep)
- Separation also occurs when the tractor driver pulls away before the trailer is ready

Threat

- Crushing
- Foot injuries
- Bruises and cuts
- Death due to a fall

Safe Work Guidelines

- Develop a traffic management process that reduces congestion
- Make more space by using pallet distributors or storing surplus skids out of the way
- Create separate zones for pedestrian activities
- Pay attention to pedestrian safety rules and safety boot policy
- Encourage truck drivers to stay in safe waiting areas

- **Do not** allow anyone in the truck when a forklift is working in it
- **Do not** allow anyone to drive over a collapsed dock leveler
- Move product that contributes to blind corners
- Use a suitable vehicle restraint system (e.g., wheel chocks or dock locking system)
- Ensure that your workplace uses a procedure to prevent trucks from pulling away early (e.g., ask the driver to hand over the keys until you are finished or use a glad hand device to lock on the brake lines)

Hazard: Poor Delivery Weather Conditions

Details

- If a truck is parked on a slope outside the building, ice from the roof may slide back towards the bay door and hit a worker on the dock or cause the dock to become slippery
- Poor delivery conditions can include lack of snow and removal, lack of help to unload bulky or awkward product, poor lighting, slip and trip hazards, and delivery in high crime areas
- Pedestrians may slip when going in and out of the trailer

Threat

- Back injury
- Strains and sprains
- Concussion
- Broken bones

Safe Work Guidelines

- Ask your employer for equipment such as shovels, salt or sand, and flashlights
- Make sure that you report any problems, incidents or accidents

- If you need help to unload or to protect yourself, make sure that your employer sends a second worker
- Talk to your clients and get as much information about delivery conditions as you can
- Check that a proper canopy is installed and adapted to various trailer heights
- If you are a receiver, wear non-slip footwear that has adequate tread

© Workplace Safety & Prevention Services 2011. Workplace Safety & Prevention Services (WSPS) grants permission to approved end users to reproduce this document in whole or in part, provided its intended use is for non-commercial, educational purposes and that full acknowledgement is given to the WSPS. Approved end users are firms registered with the Workplace Safety and Insurance Board. WSPS reserves the right to extend this permission to other stakeholders and interested parties by express written permission upon application. WSPS extends no warranty to materials amended or altered by the end user. Under no circumstances is this document, or any portion thereof, to be duplicated for purposes of sale or for external reproduction or distribution.

Revised: October 2011