# Material Handling & Transfer

For workplaces that ship or transfer products, safe material handling is an essential task to master. This is because there are many variables to factor in when considering the appropriate methods and equipment to use on which materials. Safe material handling is critical whether transferring goods from one point in the work site to another or transporting goods across Canadian roadways.

**What is Material Handling?**

Material handling is the movement, protection, storage and control of goods from one location to another.

**Material Handling Hazard Assessment**

Using formal or field-level hazard assessments, employers and workers must identify potential risks and apply hazard controls to minimize exposure to hazards.

Factors to consider include:

- Ground Conditions
- Moving through thresholds
- Proper load securement
- Use of material Handling equipment
- Danger zones

Other considerations for handling a load or cargo for movement include the size, weight, and overall make-up of the load. Workers and operators will need to have an awareness of the type of load securement required based on the individual load's composition. The destination and route of travel must also be thought through, and appropriate labels applied according to WHMIS and TDG requirements where applicable.

Hazard controls must be applied according to the hierarchy of controls prior to work beginning. Eliminate hazards whenever possible. If that is not practicable, engineered controls, administrative controls, PPE or a combination of all 3 should be utilized to effectively minimize risk.

**Load Stability & Placement**

When loading materials for transport, workers must watch for surrounding hazards. Materials must be placed on a lift truck or trailer in a safe manner that will offer the best balance. Consider the size and weight of the load,

the size of the base of support, center of gravity of the load and speed being travelled. Use dunnage and softeners to support and protect the cargo.

**Load Securement**

The biggest hazard to people working around vehicles is the possibility of being struck or crushed by materials being loaded or unloaded, the mobile equipment used for loading or unloading or falling cargo.

All goods for transport must be secured in such a way to protect it from being dislodged, falling, spilling, or creating a crush hazard. There are many different types of securements or tiedowns depending on the materials and how they are transported.

Per the OHS Code section 189, if a worker may be injured if equipment or materials are dislodged, spilled, or damaged, all reasonable steps must be taken to ensure the materials are contained, restrained, or protected to eliminate danger.

**Material Handling Equipment**

Material handling equipment such as overhead cranes, forklifts, front-end loaders, and straddle lifts are often used to help safely load and unload materials for transport. Each of these pieces of equipment, while useful, lends their own set of risks to the task.

Operators must understand the equipment's limitations prior to undertaking the task. The manufacturer's specifications, industry standards, and company operating procedures should always be consulted. Material handling equipment should only be operated by those who are trained and authorized to do so.

An additional hazard that material handling equipment throws into the mix are danger zones. These are areas beneath or beside equipment where material is being moved so that workers are at greatest risk of being struck or crushed.

Workers must avoid entering danger zones at all costs. A designated safe zone should be established where workers can remain until the load is safely secured for movement. Danger zones are often identified by markings or signs in the area or on the floor. Spotters can also be employed to ensure workers to not enter into danger zones.

**Strapping & Unstrapping Loads**

Loads can shift significantly during movement. It is essential that safe work practices are also used when unstrapping loads once it has reached its

destination.

Unloading of improperly secured objects can result in serious injury or incident and even death.

**More Information**

Workers who are charged with material handling tasks must be adequately trained to work safely. The Alberta Motor Transport Association's free online training course, "Situational Awareness in Material Handling" provides training for workers and supervisors.

Visit ***https://www.amta.ca/courses/amta-elearning*** to access your free course, today!

For more information or to speak with one of our knowledgeable safety advisors, reach out to your MHSA regional office!

| Rocky View | Red Deer | Edmonton |
|---|---|---|
| 403-279-5555 | 403-343-0002 | 780-428-1006 |
| rockyview@mhsa.ab.ca | reddeer@mhsa.ab.ca | edmonton@mhsa.ab.ca |