

# Handling & Storage of Material

Employers must ensure that there is adequate and appropriate equipment for all lifting and moving requirements. They are also responsible for ensuring that workers receive the appropriate training and instruction on how to handle materials on the farm, particularly material that could be a risk to the health and safety of individuals.

## Bulk Material in Bins, Hoppers and Tanks

There are specific requirements for storing and handling bulk material that is housed in bins, hoppers, tanks or other similar structures (e.g. barrel).

The storage of bulk material in bins, hoppers or tanks requires:

- The container to have a lid, an adequate ventilation system and to be fire resistant; **OR**
- Alternative measures that provide an equivalent level of safety (e.g. stored in a restricted area).

If there is a chance of a clog in a storage container, an employer is responsible for developing a written work procedure for the safe breaking up of clogs. This procedure should be available near the structure.

## Piled Material

Materials (e.g. pallets, barrels, boxes, uncontained bulk material) must be piled in a manner that does not interfere with lighting, entrances or exits, firefighting equipment, electrical panels, etc. Material should be located on a firm foundation, arranged in a stable manner and protected from conditions affecting the stability. If the material is piled against a wall, the wall should be properly designed to support the load. Any piled material should be regularly inspected for hazards.

When stockpiling unconsolidated bulk materials (e.g. sawdust, sand), it is the responsibility of the employer to ensure the stockpile is safe when there are people working close to or on the pile. When material is removed by means of powered mobile equipment (e.g. tractor, skidsteer, loader) consider these alternatives:

- Have the working face sloped at the angle of repose.
- Ensure vertical height of the working face is not more than 1.5 m above the maximum reach of the equipment.
- Develop written safe work procedures for removal.

Where the face is undermined or undercut:

- Keep the undercut restricted to the depth of the bucket.
- Ensure the approach of the mobile equipment is at a 90° angle ( $\pm 5^\circ$ )
- Develop written safe work procedures for removal.

When the unconsolidated material is being loaded or unloaded from a vehicle or equipment, adequate precautions must be taken to ensure the vehicle or equipment does not overturn (i.e. park on level ground with parking brake on).

## Hazardous Substance

Many hazardous substances are stored on farm (e.g. pesticides, chemicals, fertilizer, and veterinary meds). Farmers must take the appropriate precautions for the storage of hazardous substances.

Liquid hazardous substances, in a container with a capacity of 20–75 L, should be stored and transported in a safe manner with compatible material according to the manufacturer's specifications. A hazardous substance which is likely to create a hazard if it were to react with another substance should be stored separately.

*e.g. Chemicals used in the milk house should be safely stored and clearly labeled. Employees should be properly trained to understand the risks of the chemicals and the importance of keeping acids and alkalis separate.*

**Containers** that housed a hazardous substance, and will no longer be used for that purpose, must be immediately cleaned in an adequate manner (i.e. as recommended by the Environmental Farm Plan).

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**Piping Systems** transferring a hazardous substance (e.g. dairy wash cycle, plant feeding system) should be constructed of materials that resist deterioration. These systems and associated equipment must undergo a regular maintenance and inspection schedule.

To determine the appropriate storage for hazardous material, consult product Material Safety Data Sheet (MSDS), labels and supplier information.

Some other things to take into consideration are:

- Would a leak be easily detected?
- The foundation should not react with the hazardous substance.
- The need for overflow pipes or catch basins to ensure a leak is contained.
- Ensuring the container itself will not corrode from exposure to the hazardous substance.

If the possibility exists that a hazardous substance could spill in such a quantity to affect the health or safety of a person, the employer must ensure:

- Only working quantities of the substance are kept in areas where people are working.
- An emergency procedure is established to prevent the escape of the substance.
- Any spillage is immediately cleaned up.

### Rechargeable Storage Batteries

Employers are responsible for ensuring that batteries are charged by a competent person, and according to the manufacturer's specifications. They must ensure the battery:

- Is properly secured during use and charging.
- Has unobstructed ventilation openings.
- Is properly disposed of once it is no longer used.

Personal Protective Equipment (PPE), as recommended by the manufacturer, are to be worn when necessary (e.g. charging, filling or draining electrolytes).

### Compressed Gas

When compressed gas is used, stored and handled on the farm, employers are responsible for ensuring that the regulator, automatic reducing valve, gauge, hose line and any other equipment is approved for the specific compressed gas being contained. This information should be available from the supplier.

Any hose lines for conveying flammable gas or oxygen must have threads designed in compliance with the standard.

All connections are to be kept tight, and valves closed at all times, whether the cylinder is charged or empty, unless:

- Gas is flowing.
- Gas is maintaining pressure in a supply line.
- Cylinder is on standby during and between operations.

### Portable Compressed Gas Cylinders

A portable compressed gas cylinder is a cylinder having a water capacity up to 450 kg, which contains compressed or liquefied gas.

**Portable compressed gas cylinders are to be stored:**

- In a well-ventilated area (less than 52°C).
- With cylinders grouped by types of gas.
- With full and empty cylinders separated.
- At a safe distance from flames, sparks, molten metal or operations resulting in excessive heating.
- Securely, with protective devices in place.
- So they are not exposed to corrosive materials.
- Protected from falling and having objects fall on them.

**When transporting a portable gas cylinder, it must:**

- Be securely fastened and in an upright position, unless designed otherwise.
- Have a protective cap on the cylinder.
- Be transported in a manner that will prevent damage to the cylinder and its components.

When storing portable compressed gas cylinders, post the names of the gases stored and signs prohibiting smoking.

- Do not:**
- Roll a portable cylinder on its side.
  - Handle the cylinder roughly.
  - Move the cylinder with a lifting magnet.

### Refueling

Farmers must establish a refueling procedure for all equipment and ensure employees follow this safe procedure when refueling equipment.

### DISCLAIMER:

*This fact sheet is a general overview for information purposes only. Farmers must reference legislation to ensure compliance.*