

Battery powered forklifts are used in a wide variety of applications for moving and lifting materials.

Although generically referred to as forklifts they actually include a wide range of electric materials handling equipment from traditional counterbalanced forklifts to pallet jacks, walkie stackers, reach trucks, order pickers and others. Regardless of the type of electric powered equipment used, the batteries will regularly need to be recharged.



A well-managed Forklift battery charging room.
Photo courtesy of The Reject Shop.

Battery charging operations are a significant fire risk. Electrical hazards such as crushed leads, faulty adapters and short circuits are all sources of ignition. Highly flammable and explosive hydrogen gas can also be released during the battery charging process increasing the potential risk of fire and explosion.

Battery charging is often conducted in warehouses and distribution centres which contain large volumes of combustible storage. A fire starting during the battery charging process and spreading to combustible materials has the potential to result in a total loss of property assets and cause a major business interruption.

A number of fire safety precautions can reduce the risks associated with battery charging including:

- ▼ Battery charging equipment should be maintained and operated in accordance with the manufacturer's specification.
- ▼ Employees or contractors engaged in changing and charging of batteries should be appropriately trained.
- ▼ Strictly prohibit ignition sources such as hot work and smoking.
- ▼ Battery charging processes (battery and forklift) should be conducted in a well ventilated area and at least 2 metres clear from combustible materials on all sides. It should not be conducted within storage racking.
- ▼ Do not install battery charging equipment on or against combustible insulated sandwich panels such as expanded polystyrene (EPS) which are commonly found in food manufacturing and cold storage facilities.

- ▼ Where there are multiple battery charging installations locate battery charging equipment in a separate two hour fire rated compartment with appropriate ventilation.
- ▼ Protect battery charging equipment from impact damage.
- ▼ Automatic sprinkler installation is highly recommended. As a minimum the installation of monitored smoke detection is recommended to the charging area.

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