

Battery Charging & Storage Ventilation

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The OSHA regulation that governs battery charging and storage is primarily found in **Powered Industrial Truck** standard 1910.178 (g) (2). It states that, "Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries".

The standard is clear except for the requirement that there must be adequate ventilation. Since charging batteries generate hydrogen gas it is imperative that appropriate precautions be taken to prevent ignition sources and that adequate ventilation be present in the charging area. What is adequate ventilation?

OSHA's definition of "adequate ventilation" means providing natural, mechanical-general or mechanical dilution ventilation sufficient to limit the accumulation of hydrogen gas in air at the charging site to levels below the lower explosive limit of 4.1 percent. A typical exhaust fan could meet this requirement if it were used in a manner such that the concentrations of the hydrogen gas in the fan's ambient air never exceeded the lower explosive limit.