

ARTICLE 64 — STATIONARY LEAD-ACID BATTERY SYSTEMS

SECTION 6401 — SCOPE

Stationary lead-acid battery systems having an electrolyte capacity of more than 100 gallons (378.5 L) in sprinklered buildings or 50 gallons (189.3 L) in unsprinklered buildings used for facility standby power, emergency power or uninterrupted power supplies shall be in accordance with Article 64.

SECTION 6402 — DEFINITIONS

For definitions of BATTERY, LEAD-ACID and BATTERY SYSTEM, STATIONARY LEAD-ACID, see Article 2.

SECTION 6403 — PERMITS

6403.1 General. For a permit to install or operate battery systems with stationary lead-acid batteries, see Section 105.8, Permit b.1.

6403.2 Design Submittals. Prior to installation, plans shall be submitted and approved.

SECTION 6404 — INSTALLATION AND MAINTENANCE

6404.1 General. Installation and maintenance of battery systems shall be in accordance with nationally recognized standards. See Section 9003, Standards a.2.10 and a.2.11, and Section 6404.

6404.2 Safety Venting. Batteries shall be provided with safety venting caps.

6404.3 Occupancy Separation. In other than Groups A, E, I and R Occupancies, battery systems shall be located in a room separated from other portions of the building by a minimum one-hour fire-resistive occupancy separation. In Groups A, E, I and R Occupancies, battery systems shall be located in a room separated from

other portions of the building by a two-hour fire-resistive occupancy separation.

6404.4 Spill Control. Each rack of batteries, or group of racks shall be provided with a liquid-tight 4-inch (101.6 mm) spill-control barrier which extends at least 1 inch (25.4 mm) beyond the battery rack in all directions.

6404.5 Neutralization. An approved method to neutralize spilled electrolyte shall be provided. The method shall be capable of neutralizing a spill from the largest lead-acid battery to a pH between 7.0 and 9.0.

6404.6 Ventilation. Ventilation shall be provided in accordance with the Mechanical Code and the following:

1. The ventilation system shall be designed to limit the maximum concentration of hydrogen to 1.0 percent of the total volume of the room in accordance with nationally recognized standards, or

2. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (5.1 m³/s per m²) of floor area of the room.

6404.7 Signs. Doors into rooms or buildings containing stationary lead-acid battery systems shall be provided with approved signs. The signs shall state that the room contains lead-acid battery systems, that the battery room contains energized electrical circuits and that the battery electrolyte solutions are corrosive liquids.

6404.8 Seismic Protection. Battery systems shall be seismically braced in accordance with the Building Code.

6404.9 Smoke Detection. An approved automatic smoke detection system shall be installed in such areas and supervised by an approved central, proprietary or remote station service or a local alarm which will give an audible signal at a constantly attended location.