



CALIFORNIA CUPA FORUM

"An Association of Certified Unified Program Agencies"

P.O. Box 2017, Cameron Park, CA 95682-2017

530-676-0815 OFFICE 530-676-0515 FAX

www.calcupa.net

Unified Program Guidance Document

Lead Acid Battery Inventory Reporting

The Hazardous Materials Business Plan Technical Advisory Group (HMPB TAG) worked with Cal EPA, CalEMA, and industry stakeholders to develop guidance for the inventory reporting of lead acid batteries.

The HMBP TAG developed a generic lead acid battery inventory reporting page, which is attached.

The HMBP TAG came to the following conclusions:

1. Lead acid batteries should be listed as one inventory item. Electrolyte and lead should not be listed as separate inventory items. Listing them separately can give the impression they are physically separate items – electrolyte in a bottle or drum and lead plates in a stack on a shelf.
2. The Common Name should include the words “lead acid batteries”. This is the most common and universally understood term used to describe these batteries.
3. The quantity of electrolyte, which is the component of the battery which presents the primary immediate hazard to emergency responders, should be used to determine if the batteries have exceeded the reporting threshold, i.e. lead acid batteries become reportable when the aggregate amount of electrolyte reaches 55 gallons.
4. A reporting threshold based on the volume of electrolyte alone is consistent with EPCRA and California Fire Code thresholds. The EPCRA Tier II reporting threshold for sulfuric acid is 500 pounds. Assuming a maximum 40% sulfuric acid concentration, it would require a minimum of 83 gallons of electrolyte to exceed the EPCRA Tier II reporting threshold. The California Fire Code Section 608 applies to stationary storage battery systems having an electrolyte capacity of more than 50 gallons for flooded lead acid or valve-regulated lead acid (VRLA) batteries used for facility standby power, emergency power or uninterrupted power supplies.
5. The primary immediate hazard from lead acid battery electrolyte is corrosivity. The relative degree of this hazard varies primarily upon the form (e.g., gel, absorbed mat or flooded) and concentration of sulfuric acid in the electrolyte. The concentrations of other hazardous mixture components present in solution,

Page 1 of 2

Date Issued: January 27, 2011

Revision Date(s): January 27, 2011

Program Element/Technical Issue: Hazardous Materials Business Plans

Developed by: HMBP Technical Advisory Group

Unified Program Guidance Document
Administering Agency Exemptions to Hazardous Materials Business Plan Requirements

such as lead compounds, do not materially affect the primary immediate hazard the batteries present.

- a. Sulfuric acid: The percentage by weight of sulfuric acid in battery electrolyte is typically in the 25% - 40% range. The model form uses a value of 40%.
 - b. Lead compounds in solution: The amount of lead compounds in solution is difficult to get precise data on. The best available information indicates that the percentages by weight of soluble lead compounds in battery electrolyte is less than 1%, and are therefore not listed.
6. CERS should contain a generic, default lead acid battery inventory entry.
 7. To calculate the gallons electrolyte, use tables of gallons of electrolyte per battery cell from manufacturer. If unknown, multiply the fractional weight of electrolyte (from MSDS) times the total battery weight (in pounds) and divide by the minimum specific gravity (from MSDS) times 8.34 pounds per gallon; or
Electrolyte volume = (X %/100)(Y pounds)/(Z Specific Gravity)(8.34 pounds/gallon)
Example: (40%/100)(40 pounds)/(1.285)(8.34 pounds/gallon) = 1.34 gallons