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**AUTOMOTIVE** **CONSUMER** **INDUSTRIAL** **MARINE** **MEDICAL** **MOBILITY** **OEM** **SECURITY** **TELECOM** **UPS**

## MATERIAL SAFETY DATA SHEET

Material Safety Data Sheets (MSDS) are a sub requirement of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to the various subcategories including anything defined by OSHA as an “article” as an manufacturing item other than a fluid or particle: 1.) Which is formed to a specific shape or design during manufacture 2.) Which has end functions(s) dependent in the whole or in part upon its shape or design during end use 3.) Which under normal conditions of use does not more than very small quantities, e.g. minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Because all of our batteries are defined as “articles”, they are exempt from the requirements of Hazard Communication Standard, 29 CFR 1910.1200; hence a MSDS is not required.

The following components are found in a Universal Battery sealed lead acid battery:

		Weight Range:
Sulfuric Acid-Electrolyte	$H_2SO_4$	10-20%
Lead-Negative Electrode	Pb	30-60%
Lead Dioxide-Positive Electrode	$PbO_2$	5-25%
Lead Sulfate- Positive Electrode	$PbSO_4$	1-25%

The overall reaction is:  $PbO_2 + Pb + 2H_2SO_4 \leftrightarrow 2PbSO_4 + 2H_2O$

Concentration of components depends on the state of charge and discharge and the battery size. The hazardous waste code for the lead acid batteries is D008. At the end of its useful life, please recycle this battery.