MATERIAL SAFETY DATA SHEET

GS BATTERY (U.S.A.) INC.
1000 Mansell Exchange W., Suite 350, Alpharetta, GA 30022

DATE	2000 Dec	ISSUED BY	Kathy Medberry, Product Manager	Phone#	(800) 472-2879
PRODUCT NAME	Lead Acid Batteries	HAZARDOUS COMPONENTS		Lead, Sulfuric Acid	

HAZARDOUS COMPONENT

COMPONENT	%WEIGHT	T L V	LD 50 ORAL	LD 50 INHALATION	LD 50 CONTACT
Lead(Pb, PbO2, PbSO4)	about 70%		(500) mg/kg		
Sulfuric Acid	about 20%		(2,140) mg/kg		

PHYSICAL DATA

COMPONENT	DENSITY	MELTING POINT (Boiling)	SOLUBILITY IN WATER	ORDER	APPEARANCE
Lead	11.34	327.4 C	None	None	Silver-Gray Metal
Lead Sulfate	6.2	1070 C	40 mg/l (15 C)	None	White Powder
Lead Dioxide	9.4	290 C	None	None	Brown Powder
Sulfuric Acid	about 1.3	about 114 C	100%	Acidic	Clear Colorless Liquid

FLAMMABILITY DATA

COMPONENT	FLASHPOINT	EXPLOSIVE LIMIT	COMMENTS
Lead	None	None	
Sulfuric Acid	None	None	
Hydrogen			Sealed batteries can emit hydrogen only if over charged. (float voltage > 2.40 VPC)

REACTIVITY DATA

COMPONENT	STABILITY	DECOMPOSITION PRODUCTS
Sulfuric Acid	Stable at all temperature	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen
INCOMPATIBILITY		POLYMERIZATION
Reactive metals, strong bases, most organic compounds.		Will not polymerize

HEALTH HAZARD DATA

LEAD

The toxic effects of lead are cumulative and slow to appear. It affects the kidneys, reproductive organs and central nervous system. The symptoms of lead overexposure are anemia, vomiting, headaches, stomach pains (lead colic), dizziness, loss of appetite, muscle and joint pain. Exposure to lead from a battery most often occurs during lead reclamation operations through the breathing or ingestion of lead dust and/or fumes.
*****This sheet must be passed to any scrap dealer or smelter when the battery is resold.**

SULFURIC ACID

Sulfuric acid is highly corrosive. Contact can cause severe burns in the skin and eyes. Ingestion of sulfuric acid will cause GI track burns. Exposure to sulfuric acid may occur if the battery case has been damaged or the vents have been tampered with.
*****See other side for first aid information.**

SPILL OR LEAK PROCEDURES

STEPS TO TAKE IN CASE OF LEAK OR SPILL

If sulfuric acid is spilled from a battery, neutralize the acid with sodium bicarbonate (baking soda), sodium carbonate (soda ash), or calcium oxide (lime). Flush the area with water and it is acceptable to discard the neutralized acid in the sewage system.
*****Do not allow unneutralized acid in to the sewage system.**