May form explosive air/gas mixture during	
charging.	
Extremely flammable gas (hydrogen).	
Explosive, fire, blast or projection hazard.	

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (Chemical/Common Names):	CAS No.:	% by Wt:
Lead	7439-92-1	34
Lead Oxide	1309-60-0	31
Sulfuric Acid	7664-93-9	34
Lead Sulfate	7446-14-2	<1

Composition Comments All concentrations are in percent by weight.

4. FIRST AID MEASURES

Note: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) and lead for exposures that may occur during battery production or container breakage or under extreme heat conditions such as fire.

Inhalation Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen. Consult a physician.

Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

Skin contact Sulfuric Acid: Give large quantities of water; Do NOT induce vomiting or aspiration into the lungs may

occur and can cause permanent injury or death; consult physician.

Lead: Consult physician immediately.

Eye contact Sulfuric Acid and Lead: Flush immediately with large amounts of water for at least 15 minutes while lifting

lids; Seek immediate medical attention if eyes have been exposed directly to acid.

Sulfuric Acid: Give large quantities of water; Do NOT induce vomiting or aspiration into the lungs may Ingestion

occur and can cause permanent injury or death; consult physician.

Lead: Consult physician immediately.

5. FIRE FIGHTING MEASURES

Flash Point Not applicable unless individual components exposed.

No data available. **Auto ignition**

Temperature

Media

Flammable Limits LEL = 4.1% (Hydrogen Gas in air); UEL = 74.2%

Extinguishing

CO2; foam; dry chemical. Do not use carbon dioxide directly on cells. Avoid breathing vapors. Use

appropriate media for surrounding fire.

Special Fire Fighting

Procedures

Use positive pressure, self-contained breathing apparatus. Beware of acid splatter during water application and wear acid-resistant clothing, gloves, face and eye protection. If batteries are on charge,

shut off power to the charging equipment, but note that strings of series connected batteries may still

pose risk of electric shock even when charging equipment is shut down.

Unusual Fire and Explosion Hazard Highly flammable hydrogen gas is generated during charging and operation of batteries. If ignited by burning cigarette, naked flame or spark, may cause battery explosion with dispersion of casing fragments and corrosive liquid electrolyte. Carefully follow manufacturer's instructions for installation and service. Keep away all sources of gas ignition and do not allow metallic articles to simultaneously contact the negative and positive terminals of a battery. Follow manufacturer's instructions for installation and

service.

6: ACCIDENTAL RELEASE MEASURES

Protective Stop flow of material, contain/absorb small spills with dry sand, earth, and vermiculite. Do not use Measures to be combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium

Lead Acid Battery SDS US