

# Material Safety Data Sheet

Infosafe No™ HXUOJ Issue Date : March 2012 ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** LEAD-ACID BATTERY  
**Company Name** ACDELCO  
**Address** 191 Salmon Street Port Melbourne Melbourne  
VIC 3207 Australia  
**Emergency Tel.** 1800 638 556 (24hrs)  
**Recommended Use** Electric storage battery.

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** Classified as hazardous  
HAZARDOUS SUBSTANCE.  
DANGEROUS GOODS.  
Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.

**Risk Phrase(s)** Classified as hazardous  
R20/22 Harmful by inhalation and if swallowed.  
R35 Causes severe burns.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrase(s)** S1/2 Keep locked up and out of reach of children.  
S23 Do not breathe gas/fumes/vapour/spray  
S24/25 Avoid contact with skin and eyes.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28 After contact with skin, wash immediately with plenty of water  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell seek medical advice immediately  
S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

**Safety Hazards** The battery is a sealed unit, however the battery may rupture and chemicals within may be exposed. Hazards described are for situations if exposed to chemicals.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Information on Composition** Lead: Pure lead 62% / Calcium lead 27% / Antimony lead 11%

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>	<b>Hazard Symbol</b>	<b>Risk Phrase</b>
	Lead (Pb, PbO <sub>2</sub> , PbSO <sub>4</sub> )		60-70 %		
	Sulfuric Acid		25-30 %		
	Polypropylene/PP RESIN		7-10 %		
	PE Separator		1-2 %		

## 4. FIRST AID MEASURES

**Inhalation** If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

**Ingestion** Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

**Skin** Remove all contaminated clothing. Wash gently and thoroughly with water and non-abrasive soap for 15 minutes. Ensure contaminated clothing is washed before re-use or discard. Seek medical attention.

**Eye** If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.

**First Aid Facilities** Eye wash fountain, safety shower and normal washroom facilities.

**Advice to Doctor** Treat symptomatically.

**Other Information** For advice in an emergency, contact a Poisons Information Centre (Phone

# Material Safety Data Sheet

infosafe  
CS: 1.6.8

Page: 2 of 8

Infosafe No™ HXUOJ Issue Date : March 2012 ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

Australia 13 1126) or a doctor at once.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media** Use appropriate fire extinguisher for surrounding environment.  
**Hazards from Combustion Products** If a battery ruptures, use dry chemical, sand or carbon dioxide.  
**Hazchem Code** Under fire conditions this product may emit toxic and/or irritating fumes and gases including lead, lead compounds and sulfuric acid fumes.  
2R  
**Precautions in connection with Fire** Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

## 6. ACCIDENTAL RELEASE MEASURES

**Emergency Procedures** Corrosive material. Do not allow contact with skin and eyes. Do not breathe vapours. It is essential to wear self-contained breathing apparatus (S.C.B.A) and full personal protective equipment and clothing to prevent exposure. Increase ventilation. If possible contain the spill. Place inert absorbent material onto spillage. If necessary neutralise the residue with a dilute solution of sodium carbonate. Collect the material and place into a suitable labelled container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** Corrosive liquid. Attacks skin and eyes. Causes burns. Handle batteries cautiously to avoid spills. Wear suitable protective clothing, gloves and eye/face protection when mixing and using. Use in designated areas with adequate ventilation. Avoid breathing in vapours, mist or fumes. Keep containers closed when not in use. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities.  
**Conditions for Safe Storage** Store in a cool dry well-ventilated area. Store away from oxidising agents and bases/acids. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Provide a catch-tank in a bunded area. Store in original packages as approved by manufacturer. For information on the design of the storeroom, reference should be made to Australian Standard AS 3780-2008: The storage and handling of corrosive substances. Reference should also be made to all State and Federal regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No exposure value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC), Australia. However, the available exposure limits for ingredients are listed below:

National Occupational Health And Safety Commission (NOHSC), Australia Exposure Standards:

Substance	TWA		STEL		NOTICES
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Sulphuric acid	-	1	-	3	-
Lead (inorganic dusts/fumes)	-	0.15	-	-	-
Antimony	-	0.5	-	-	-

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

# Material Safety Data Sheet

infosafe  
CS: 1.6.8

Page: 3 of 8

Infosafe No™ HXUOJ Issue Date : March 2012 ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

<b>Biological Limit Values</b>	No biological limit allocated.
<b>Engineering Controls</b>	Provide sufficient ventilation to keep airborne levels below the exposure limits. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required.
<b>Respiratory Protection</b>	If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable mist filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.
<b>Eye Protection</b>	Safety glasses with side shields, goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
<b>Hand Protection</b>	Wear gloves of impervious material, such as rubber or plastic acid-resistant gloves with elbow-length gauntlet are recommended. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
<b>Body Protection</b>	Suitable protective work wear. Acid-resistant apron, clothing and boots are recommended especially where large quantities are handled.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Sealed unit, containing off-white cloudy liquid
<b>Odour</b>	Characteristic
<b>Melting Point</b>	327.5 *
<b>Boiling Point</b>	1740°C *
<b>Solubility in Water</b>	Soluble in water
<b>Specific Gravity</b>	11.34 g/cm <sup>3</sup> *
<b>pH Value</b>	Not available
<b>Vapour Pressure</b>	1.33 hPa *
<b>Vapour Density (Air=1)</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	Non-flammable
<b>Auto-Ignition Temperature</b>	Not available
<b>Flammable Limits - Lower</b>	Not available
<b>Flammable Limits - Upper</b>	Not available
<b>Other Information</b>	* for Lead

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions of use.
<b>Conditions to Avoid</b>	Prolonged overcharge, sources of ignition, mechanical impact, contact with incompatible materials.
<b>Incompatible Materials</b>	If a battery ruptures, avoid contact with organic materials and alkaline materials.

# Material Safety Data Sheet

infosafe  
CS: 1.6.8

Page: 4 of 8

Infosafe No™ HXUOJ                      Issue Date : March 2012                      ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

<b>Hazardous Decomposition Products</b>	Sulfuric acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen. Lead compounds: High temperatures likely to produce toxic metal fume, vapor or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.
<b>Hazardous Reactions</b>	Sulfuric acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. Lead compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.
<b>Hazardous Polymerization</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicology Information</b>	No toxicity data available for this product.
<b>Inhalation</b>	Harmful by inhalation. Inhalation of mists or vapours will result in respiratory irritation and possible harmful corrosive effects including lesions of the nasal septum, pulmonary edema, pneumonitis and emphysema.
<b>Ingestion</b>	Harmful if swallowed. Ingestion of this product can cause irritation to the mouth, throat, oesophagus and stomach with symptoms of diarrhoea. Ingestion of this product will cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.
<b>Skin</b>	Causes severe burns. Corrosive to the skin. Skin contact can cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
<b>Eye</b>	Causes severe burns. Eye contact will cause stinging, blurring, tearing, severe pain and possible permanent corneal damage. Burns to the eye may cause blindness. Contact of undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury.
<b>Chronic Effects</b>	The effects of lead poisoning may not be apparent immediately but significant absorption by inhalation or swallowing over a period of time may produce adverse effects due to the accumulation of lead in the body. Studies of humans and animals indicate that lead may exert gametotoxic, embryotoxic, and teratogenic effects that could influence the survival and development of the fetus and newborn. It appears that prenatal viability and development may also be indirectly affected by lead through its effects on the health of the expectant mother. The unborn therefore constitutes a group at risk for the effects of lead on health. Also, certain information regarding male reproductive functions has led to concern regarding the impact of lead on men.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	No ecological data are available for this material.
<b>Persistence / Degradability</b>	Not available
<b>Mobility</b>	Not available
<b>Environ. Protection</b>	Do not allow product to enter drains, waterways or sewers.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Considerations</b>	Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations.
--------------------------------	--

## 14. TRANSPORT INFORMATION

<b>Transport Information</b>	This material is classified as a Class 8 (Corrosive Substances) Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition). Class 8 Dangerous Goods are incompatible in a placard load with any of the following:
------------------------------	--

# Material Safety Data Sheet

Infosafe No™ HXUOJ Issue Date : March 2012 ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

- Class 1, Explosives
  - Division 4.3, Dangerous When Wet Substances
  - Division 5.1, Oxidising Agents
  - Division 5.2, Organic Peroxides
  - Class 6, Toxic or Infectious Substances, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids
  - Class 7, Radioactive Substances
- and are incompatible with food and food packaging in any quantity.  
Strong acids must not be loaded in the same freight container or on the same vehicle with strong alkalis. Packing Group I and II acids and alkalis should be considered as strong.

**U.N. Number** 2794  
**Proper Shipping Name** BATTERIES, WET, FILLED WITH ACID  
**DG Class** 8  
**Hazchem Code** 2R  
**EPG Number** 8A1  
**IERG Number** 37

## 15. REGULATORY INFORMATION

**Regulatory Information** Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.  
Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Poisons Schedule** S6

**Hazard Category** Harmful, Corrosive, Dangerous for the environment

## 16. OTHER INFORMATION

**Date of preparation or last revision of MSDS** MSDS Reviewed: March 2012  
Supersedes: May 2008

<b>User Codes</b>	<b>User Field Title</b>	<b>User Code</b>
	Approval Number	5124
	Part Number	12N243WC LMA
	Part Number	12N244WC LMA
	Part Number	22F530SMF SMF
	Part Number	22F530SMFDF SMF
	Part Number	22F600SMF SMF
	Part Number	22F600SMFDF SMF
	Part Number	22F660SMF SMF
	Part Number	22F660SMFDF SMF
	Part Number	22F66WC LMA
	Part Number	22FR530SMF SMF
	Part Number	22FR600SMF SMF
	Part Number	22FR660SMF SMF
	Part Number	22FR66WC LMA
	Part Number	30H102WC LMA
	Part Number	30HL102WC LMA
	Part Number	50D20LWC LMA
	Part Number	50D20RWC LMA
	Part Number	55457WC LMA
	Part Number	55458WC LMA
	Part Number	55D23LWC LMA
	Part Number	55D23RWC LMA

# Material Safety Data Sheet

Infosafe No™ HXUOJ                      Issue Date : March 2012                      ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

<u>User Codes</u>	<u>User Field Title</u>	<u>User Code</u>
Part Number		56318WC LMA
Part Number		56330WC LMA
Part Number		56638WC LMA
Part Number		58515WC LMA
Part Number		58827WC LMA
Part Number		58828WC LMA
Part Number		60044WC LMA
Part Number		AU22530SMFDF SMF
Part Number		AU22600SMFDF SMF
Part Number		AU22660SMFDF SMF
Part Number		AU2266WC LMA
Part Number		AU22R530SMF SMF
Part Number		AU22R600SMF SMF
Part Number		AU22R660SMF SMF
Part Number		AU22R66WC LMA
Part Number		DCM24LSMF SMF
Part Number		DCM24SMF SMF
Part Number		DCM27LSMF SMF
Part Number		DCM27SMF SMF
Part Number		GC2105 Golf Cart
Part Number		HCM24LSMF SMF
Part Number		HCM24SMF SMF
Part Number		HCM27LSMF SMF
Part Number		HCM27SMF SMF
Part Number		HCM31LSMF SMF
Part Number		HCM31SMF SMF
Part Number		M24SMF600 SMF
Part Number		M27SMF730 SMF
Part Number		M31SMF830 SMF
Part Number		N100WC LMA
Part Number		N120WC LMA
Part Number		N150WC LMA
Part Number		N200WC LMA
Part Number		NS40ZLSWC LMA
Part Number		NS40ZLWC LMA
Part Number		NS40ZSWC LMA
Part Number		NS40ZWC LMA
Part Number		NS60LSWC LMA
Part Number		NS60LWC LMA
Part Number		NS60SWC LMA
Part Number		NS60WC LMA
Part Number		NX1105LWC LMA
Part Number		NX1105WC LMA
Part Number		NX1207LWC LMA
Part Number		NX1207WC LMA
Part Number		S1110H SMF
Part Number		S1111H SMF
Part Number		S1150 SMF
Part Number		S1151 SMF
Part Number		S115D31L SMF

# Material Safety Data Sheet

Infosafe No™ HXUOJ                      Issue Date : March 2012                      ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

<u>User Codes</u>	<u>User Field Title</u>	<u>User Code</u>
	Part Number	S115D31R SMF
	Part Number	S246MF SMF
	Part Number	S24R6MF SMF
	Part Number	S31900MF SMF
	Part Number	S31901MF SMF
	Part Number	S346MF SMF
	Part Number	S347MF SMF
	Part Number	S356MF SMF
	Part Number	S40E20L SMF
	Part Number	S40E20LBH SMF
	Part Number	S40E20LS SMF
	Part Number	S40E20R SMF
	Part Number	S40E20RS SMF
	Part Number	S416MF SMF
	Part Number	S48D26L SMF
	Part Number	S48D26R SMF
	Part Number	S50D20L SMF
	Part Number	S50D20R SMF
	Part Number	S53528 SMF
	Part Number	S53529 SMF
	Part Number	S54316 SMF
	Part Number	S54317 SMF
	Part Number	S54459 SMF
	Part Number	S54464 SMF
	Part Number	S54519 SMF
	Part Number	S55414 SMF
	Part Number	S55457 SMF
	Part Number	S55458 SMF
	Part Number	S55459 SMF
	Part Number	S55523 SMF
	Part Number	S55559 SMF
	Part Number	S55559HD SMF
	Part Number	S55565 SMF
	Part Number	S55B24L SMF
	Part Number	S55B24LS SMF
	Part Number	S55B24R SMF
	Part Number	S55B24RS SMF
	Part Number	S55D23L SMF
	Part Number	S55D23R SMF
	Part Number	S55D26L SMF
	Part Number	S55D26R SMF
	Part Number	S56220 SMF
	Part Number	S56318 SMF
	Part Number	S56323 SMF
	Part Number	S56330 SMF
	Part Number	S56638 SMF
	Part Number	S56640 SMF
	Part Number	S56820 SMF
	Part Number	S56821 SMF
	Part Number	S57220 SMF

# Material Safety Data Sheet

infosafe  
CS: 1.6.8

Page: 8 of 8

Infosafe No™ HXUOJ Issue Date : March 2012 ISSUED by ACDELCO

Product Name **LEAD-ACID BATTERY**

Classified as hazardous

<u>User Codes</u>	<u>User Field Title</u>	<u>User Code</u>
	Part Number	S58014 SMF
	Part Number	S58515 SMF
	Part Number	S586MF SMF
	Part Number	S58827 SMF
	Part Number	S58828 SMF
	Part Number	S58R6MF SMF
	Part Number	S59042 SMF
	Part Number	S59218 SMF
	Part Number	S59542 SMF
	Part Number	S60038 SMF
	Part Number	S656MF SMF
	Part Number	S657MF SMF
	Part Number	S65D31L SMF
	Part Number	S65D31R SMF
	Part Number	S68032 SMF
	Part Number	S70D23L SMF
	Part Number	S70D23R SMF
	Part Number	S755MF SMF
	Part Number	S756MF SMF
	Part Number	S75D31L SMF
	Part Number	S75D31R SMF
	Part Number	S786MF SMF
	Part Number	S78DT6MF SMF
	Part Number	S80D26L SMF
	Part Number	S80D26R SMF
	Part Number	S85B60L SMF
	Part Number	S85B60R SMF
	Part Number	S95D31L SMF
	Part Number	S95D31LHD SMF
	Part Number	S95D31R SMF
	Part Number	S95D31RHD SMF
	Part Number	SN100 SMF
	Part Number	SN100L SMF
	Part Number	SN120 SMF
	Part Number	SN120L SMF
	Part Number	SN150 SMF
	Part Number	SN150L SMF
	Part Number	SN200 SMF
	Part Number	SN200L SMF
	Part Number	SU160 SMF
	Part Number	SU1R60 SMF
	...End Of MSDS...	

© Copyright ACOHS Pty Ltd

Copyright in the source code of the HTML, PDF, XML, XFO and any other electronic files rendered by an Infosafe system for Infosafe MSDS displayed is the intellectual property of Acohs Pty Ltd.

Copyright in the layout, presentation and appearance of each Infosafe MSDS displayed is the intellectual property of Acohs Pty Ltd. The compilation of MSDS's displayed is the intellectual property of Acohs Pty Ltd.

Copying of any MSDS displayed is permitted for personal use only and otherwise is not permitted. In particular the MSDS's displayed cannot be copied for the purpose of sale or licence or for inclusion as part of a collection of MSDS without the express written consent of Acohs Pty Ltd.