

Material Safety Data Sheet

ACDELCO BATTERY, WET FILLED WITH ACID

Infosafe No. 1EVIW **Issue Date** January 2007 **Status** ISSUED by ACDELCOG

Classified as hazardous

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name ACDELCO BATTERY, WET FILLED WITH ACID
Product Code
Product Use Lead/acid storage battery.
Company Name ACDELCO, GM HOLDEN LTD
Address 99 Princess Hwy, Dandenong South Dandenong South VIC 3175
Emergency Tel. 03 97977340 or 03 97977341 (between 9am-5pm)

Other Names	Name	Product Code
	BATTERY, WET, FILLED WITH ACID	

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Lead	7439-92-1	30-60 %
	Sulphuric Acid	7664-93-9	10-30 %
	Polypropylene/PolyethyleneMixture		Balance

Substance Chemical Family Liquid content - sulfuric acid
VOL/WGT: Varies with model

3. HAZARDS IDENTIFICATION

Danger of cumulative effects.
 Causes severe burns.
 Possible risk of impaired fertility.
 May cause harm to the unborn child
 Harmful by inhalation and if swallowed.

Reproductive According to NOHSC this product is a category (1) reproductive hazard - May

Toxicity Chronic Effects	cause harm to the unborn child. Possible risk of impaired fertility.
Inhalation	Danger of cumulative effects. Exposure to battery contents. 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.
Ingestion	Exposure to battery contents. Harmful if swallowed. Ingestion of this product may cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.
Skin	Exposure to battery contents. Skin contact will cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
Eye	Exposure to battery contents. Eye contact will cause stinging, blurring, tearing, severe pain and possible permanent corneal damage.
Other Information	Emergency Overview: Danger! Explosive gases. Poison causes severe burns. Wet Storage Battery is a manufactured article composed of lead and acid encased in polypropylene, sealed and vented with a flame arrestor to reduce flashback potential. The case color varies. These batteries contain dilute sulfuric acid, a corrosive substance, and may expel explosive gases.

4. FIRST AID MEASURES

Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Seek immediate medical attention.
Ingestion	Do NOT induce vomiting. Wash out mouth with water. Seek immediate medical attention.
Skin	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. Seek immediate medical attention.
Eye	If contact with the eye(s) occurs, wash with copious amounts of water holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek immediate medical attention.
First Aid Facilities Advice to Doctor	Eye wash station, safety shower and normal washroom facilities. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media Specific Methods Specific Hazards	Class ABC extinguisher, carbon dioxide, foam, halon, water spray. Cool exterior of battery if exposed to fire to prevent rupture. Acid mists and vapors in a fire are corrosive. Hydrogen and oxygen gases are produced during normal battery operation and charging. These gases escape through the battery vents and may form an explosive atmosphere around the battery if ventilation is poor. Avoid open flame, sparks and other ignition sources in areas where batteries are used or stored. Sulfuric acid is an oxidizer and can ignite combustibles upon contact.
Hazardous Combustion Products Protective Equipment Flash Point Flammable Limits UEL Flammable Limits LEL	Under fire conditions this product may emit toxic and/or irritating fumes including acid mists and vapors, toxic fumes from burning plastic. Wear full protective clothing and use self-contained breathing apparatus (SCBA). Not applicable (Hydrogen Gas) 74.2% UEL (Hydrogen Gas) 4.1 % LEL

Other Information DANGER! Explosive Gases: Always shield eyes and face from battery. Cigarettes, flames, sparks could cause battery to explode. Do not charge or use booster cables or adjust post connections without proper instruction and training.

6. ACCIDENTAL RELEASE MEASURES

Wear full personal protective equipment and clothing to avoid any exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unnecessary personnel. If possible contain the spill. Place inert absorbent material onto spillage. Use clean non-sparking tools to collect the material and place into a suitable labelled corrosion resistant container. Do not dilute material but contain. Dispose of waste according to federal, Environmental Protection Authority and state regulations. If the spillage enters the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

7. HANDLING AND STORAGE

Handling Use in a well ventilated area. DO NOT store or use in confined spaces. Build up of mists or vapours in the atmosphere must be prevented. Avoid breathing in spray or mists or vapours. Do not use near welding or other ignition sources and avoid sparks. Do not smoke. Use a battery carrier to lift battery or place hands at opposite corners to avoid spilling acid through the vents. Avoid contact with internal components of batteries. Do not tilt batteries to an angle greater than 45 degrees. Do not smoke when working near a battery.

Storage Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, foodstuffs, and clothing and out of direct sunlight. Keep closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks.
Special Sensitivity: Avoid direct conductive connection across positive and negative terminals to prevent short circuit.
Batteries must be kept in an upright position away from ignition sources. Stack batteries so as to prevent accidental contact between terminal and/or other damage to terminals or containers. Whenever feasible, store on shipping pallet or rack. Do not stack loaded pallets or racks on top of other batteries. When batteries are completely discharged, the electrolyte will freeze when stored below - 6.6°C. Fully charged batteries may be stored at temperatures as low as - 6.6°C.

Storage Temperatures Min: - 28°C for fully charged batteries. - 6°C for completely discharged batteries.
Max: 26°C for low shelf discharge but up to 38°C is safe.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Name	STEL	STEL	TWA	TWA	FootNote
		(mgm3)	(ppm)	(mgm3)	(ppm)	
	Lead			0.15		
	Sulphuric Acid	3		1		

Other Exposure Information No exposure standards have been established for this material by the National Occupational Health And Safety Commission (NOHSC). However, exposure standards for ingredients are stated above: As published by the National Occupational Health and Safety Commission (NOHSC):
TWA - the Time-Weighted Average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.
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. According to current knowledge these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.
Respiratory Protection	If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.
Eye Protection	Safety glasses with side shields, goggles or full-face shield as appropriate recommended. 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.
Hand Protection	Wear gloves of impervious material such as rubber, neoprene, vinyl coated, PVC. 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.
Body Protection	Wear appropriate clothing including overalls and chemical resistant apron.
Eng. Controls	Provide sufficient ventilation to keep airborne levels below the exposure limit. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, an explosion proof exhaust ventilation system is required.
Biological Limit Values	No biological limit allocated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	A manufactured article cased in plastic with a sealed case, terminals and flame arrestor vent caps. Case color varies.
Odour	Product is essentially odorless.
Melting Point	> 149°C for case
Boiling Point	Not applicable
Solubility in Water	Miscible (sulphuric acid)
Specific Gravity (H₂O=1)	1.280 at @ 25°C (electrolyte)
pH Value	pH: < 1.0 (dilute sulfuric acid)
Vapour Pressure	Not applicable
Vapour Density (Air=1)	Not applicable
Flash Point	Not applicable
Flammable Limits LEL	(Hydrogen Gas) 4.1 % LEL
Flammable Limits UEL	(Hydrogen Gas) 74.2% UEL

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
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Hazardous**Polymerization** Will not occur**Materials to****Avoid** Strong oxidizing or reducing agents.**Hazardous** Can emit highly toxic fumes when heated. Combustion can produce carbon**Decomposition** dioxide and carbon monoxide. Will release an explosive hydrogen/oxygen gas**Products** mixture. Oxides of lead, lead and/or lead compounds may be released. Sulphuric acid may release sulphur dioxide and/or sulphur trioxide.**Conditions to** Use only approved charging methods. Avoid overcharging. Avoid**Avoid** shortcircuiting. Avoid sparks and other ignition sources. Do not open, break or melt the casing.

11. TOXICOLOGICAL INFORMATION

Toxicology Wet storage batteries are sealed articles. Exposure to lead, acid and lead
Information contaminated acid is not anticipated during normal storage, handling and intended use or maintenance of the battery. Battery recycling personnel should carefully follow established employer protocols when processing batteries and battery components.**Inhalation** Exposure to battery contents. 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.**Ingestion** Exposure to battery contents. Harmful if swallowed. Ingestion of this product may cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.**Skin** Exposure to battery contents. Skin contact will cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.**Eye** Exposure to battery contents. Eye contact will cause stinging, blurring, tearing, severe pain and possible permanent corneal damage.**Chronic Effects** Danger of cumulative effects.**Reproductive** According to NOHSC this product is a category (1) reproductive hazard - May
Toxicity cause harm to the unborn child. Possible risk of impaired fertility.

12. ECOLOGICAL INFORMATION

Environment**Protection** Do not allow product to enter drains, waterways or sewers.**Mobility** Not available.**Persistence /**
Degradability Not available.**Ecotoxicity** No ecological data is available for this material.

13. DISPOSAL CONSIDERATIONS

Dispose of waste according to federal, EPA, state and local regulations.

14. TRANSPORT INFORMATION

This material is classified as a Class 8 (Corrosive) Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following:

- Class 1, Explosive
- Class 4.3, Dangerous When Wet Substance
- Class 5.1, Oxidising Agent
- Class 5.2, Organic Peroxide
- Class 6, Toxic and Infectious Substances, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids

- Class 7, Radioactive Substance
and are incompatible with food and food packaging in any quantity.

U.N. Number 2794
Proper Shipping Name BATTERIES, WET, FILLED WITH ACID
DG Class 8
Packaging Method #
Packing Group III
EPG Number 8A1
IERG Number 37

15. REGULATORY INFORMATION

Risk Phrase

R33 Danger of cumulative effects.
R35 Causes severe burns.
R62 Possible risk of impaired fertility.
R61(1) May cause harm to the unborn child
R20/22 Harmful by inhalation and if swallowed.

Safety Phrase S23 Do not breathe gas/fumes/vapour/spray
S27 Take off immediately all contaminated clothing.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Poisons Schedule Not Scheduled
Hazard Category Toxic, Corrosive

16. OTHER INFORMATION

User Codes	<u>User Title Label</u>	<u>User Code</u>
	Approval Number	5102
	Part Number	657MF
	Part Number	786MF
	Part Number	78DT6MF
	Part Number	H1150
	Part Number	H1151
	Part Number	H31900CT
	Part Number	H31901CT
	Part Number	HDC27F
	Part Number	HM24MF
	Part Number	HM27MF
	Part Number	92184560
	Part Number	HM30HMF
	Part Number	HS2000
	Part Number	845A
	Part Number	GCV8

SDS History MSDS Reviewed: December 2006

Poisons Schedule Not Scheduled
Hazard Category Toxic, Corrosive

End of MSDS

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