MAINTENANCE-FREE
SEALED PURE-LEADS

MATERIAL SAFETY DATA SHEET

Identity (As used on Label and List)	*Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

Section I

BATTERY MANUFACTURER'S MSDS DISTRIBUTED BY: DUAL-LITE MSDS #1	Emergency Telephone Number Not applicable
	Telephone Number for Information Not applicable
	Date Prepared Jan. 31, 1996
	Signature of Preparer (optional)

Section II -- Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Lead - Lead Oxides			50 ug/m^3	56-67%
Sulfuric Acid Electrolyte			1.0 mg/m^3	6-8%
Non-Hazardous Materials			------	26-37%

Section III -- Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H_2O=1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR=1)	N/A	Evaporation Rate Butyl Acetate=1	N/A

Solubility in Water
N/A

Appearance and Odor
N/A

Section IV -- Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Non-Flammable	N/A		

Extinguishing Media
Multi-purpose dry chemical or multi-purpose CO_2.

Special FIre Fighting Procedures
Cool Battery exterior to prevent rupture. Acid mists and vapors in a fire are toxic and corrosive.

Unusual Fire and Explosion Hazards
Hydrogen gas may be produced and may explode if ignited. Remove all sources of ignition. Ventilate area.

(Reproduce locally)

Section V -- Reactivity Data

Stability	Unstable		Conditions to Avoid: Avoid shorting. Use only approved charging methods.
	Stable	XX	

Incompatibility (Materials to Avoid)
Solvents may dissolve battery case material.

Hazardous Decomposition or By-products
Hydrogen Gas

Hazardous Polymerization	May Occur		Conditions to Avoid: Avoid temperature extremes above 80˚C and below 40˚C. Do not puncture battery case.
	Will Not Occur	XX	

Section VI -- Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
Eyes		XX	XX

Health Hazards (Acute and Chronic)
Severe burns and eye damage from sulfuric acid electrolyte. Illness from sulfur oxide fumes.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
N/A			

Signs and Symptoms of Exposure
Irritation and acid burns. Pungent odor and respiratory irritation.

Medical Conditions Generally Aggravated by Exposure
N/A

Emergency and First Aid Procedures
For sulfur oxide fumes, disconnect batteries, evacuate and ventilate. External, flush areas contaminated by sulfuric acid electrolyte with water.
Internal, drink large quantities of water or milk, followed by milk of magnesia, beaten eggs or vegetable oil.

Section VII -- Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled.
Avoid contact with sulfuric acid electrolyte from battery. Flush with water.

Waste Disposal Method
Neutralize with solution of baking soda in water. Dispose with automotive battery scrap.

Precautions to Be Taken in Handling and Storing
Batteries with released electrolyte shall be sealed in polyethylene bags.

Other Precautions
Do not crack battery cases. Do not overcharge. Keep lighted cigarettes, sparks, and flames away from charging batteries.

Section VIII -- Control Measures

Respiratory Protection (Specify Type)
N/A

Ventilation	Local Exhaust	Special
	Mechanical (General)	Other Natural convection

Protective Gloves Use rubber gloves if case is cracked	Eye Protection Recommended

Other Protective Clothing or Equipment
N/A

Work/Hygienic Practices
N/A

Section IX -- Transportation

"Pure-lead" batteries are starved electrolyte batteries which means the electrolyte is absorbed in the separator material. The batteries are also sealed. As of September 30, 1995, sealed "pure-lead" batteries were classified as “nonspillable batteries”, and as such are not subject to the full requirements of 49 CFR § 173.159. The previous exempt classification, “Dry Batteries, Not Restricted” was discontinued effective September 30, 1995. “Nonspillable” batteries are excepted from the regulation’s comprehensive packaging requirements if the following conditions are satisfied:

(1) The battery is protected against short circuits and is securely packaged.
(2) For batteries manufactured after September 30, 1995, the battery and outer packaging must be plainly and durably marked “NONSPILLABLE” or “NONSPILLABLE BATTERY” and
(3) The battery is capable of withstanding vibration and pressure differential tests specified in 49 CFR § 173.159(d).

Sealed "pure-lead" batteries have been tested by WYLE Scientific Services & Systems Laboratories Group and determined to be in compliance with the vibration and pressure differential tests contained in 49 CFR § 173.159(d), and therefore as of September 30, 1995, excepted from the DOT requirements set forth in 49 CFR § 173.159, other than paragraph (d).

Battery shipments from all locations, will be properly labeled in accordance with applicable DOT regulations. **Packaging changes performed at other locations may require additional labeling, since in addition to the battery itself containing the required marking, the outer packaging of the battery must also contain the required marking: “NONSPILLABLE” OR “NONSPILLABLE BATTERY”.** Because the batteries are classified as “Nonspillable” and meet the three conditions above, [from § 173.159(d)] they do not have an assigned UN number nor do they require additional DOT hazard labeling.

The regulation change effective September, 1995, was to clarify and distinguish to shippers and transporters, all batteries that have been tested and determined to be in compliance with the DOT Hazardous Material Regulations, the International Civil Aeronautics Organization (ICAO), and the International Air Transport Association (IATA) Packing Instruction 806 and Special Provision A67, and therefore excepted from all other requirements of the regulations and classified as a “nonspillable battery”.

Section X -- Additional Information

The sealed lead acid battery is determined to be an “article” according to the OSHA Hazard Communication Standard and is thereby excluded from any requirements of the standard. The Material Safety Data Sheet is therefore supplied for informational purposes only.

The information and recommendations contained herein have been compiled from sources believed to be reliable and represent current opinion on the subject. No warranty, guarantee, or representation is made as to the absolute correctness or sufficiency of any representation contained herein and the manufacturer assumes no responsibility in connection therewith, nor can it be assumed that all acceptable safety measures are contained herein, or that additional measures may not be required under particular or exceptional conditions or circumstances.

NIA or Not Applicable - Not applicable for finished product used in normal conditions.