

Material Safety Data Sheet – 03

Revision Date: May 7, 2004

INFORMATION ONLY – Please read Section X



SECTION I - Product and Manufacturer Identity

Sealed Lead Battery : Cyclon, Genesis, SBS, SBS J, Hawker XE/EP or Odyssey
Varley Red Top 8, 20, 25, 60
Red Flash 700, 750, 1000, 1100, 1200, 1800, 3500

Producer's Name and Address:
DMS technologies, Belbins Business Park, Cupernham Lane,
Romsey, Hampshire, SO51 7JF, UK

Emergency Telephone Number:
+44 (0) 1794 525400
Customer Service Telephone No
+44 (0) 1794 525463

SECTION II - Ingredients

Hazardous Components	CAS #	OSHA PEL-TWA	% (By weight)
Lead	7439-92-1	50µg/m ³	45 - 60 %
Lead Dioxide	1309-60-0	50µg/m ³	15 - 25 %
Sulfuric Acid Electrolyte	7664-93-9	1.0 mg/m ³	15 - 20 %
Non-Hazardous Materials	N/A	N/A	5 - 10 %

SECTION III - Physical/Chemical Characteristics

Boiling Point - N/A

Vapor Pressure (mm Hg.) - N/A

Solubility in Water - N/A

Specific Gravity (H₂O=1) - NA

Melting Point - N/A

Appearance & Color - N/A

SECTION IV - Fire & Explosion Hazard Data

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

Extinguishing Media: Multipurpose Dry chemical, CO₂ or water spray.

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.

SECTION V- Reactivity Data and Shipping/Handling Electrical Safety

Conditions to Avoid: Avoid shorting, high levels of short circuit current can be developed across the battery terminals. Do not rest tools or cables on the battery. Avoid over-charging. Use only approved charging methods. Do not charge in gas tight containers.

Requirements for Safe Shipping and Handling of Cyclon Cells:

Warning – Electrical Fire Hazard – Protect Against Shorting

- Terminals can short and cause a fire if not insulated during shipping.
- Cyclon product must be labeled “NONSPILLABLE” during shipping. Follow all federal shipping regulations. IIs
- Protective caps or other durable inert material must be used to insulate each terminal of each cell unless cells are shipping in the original packaging from DMS technologies, in full box quantities.
- Protective caps are available for all cell sizes by contacting DMS technologies Customer Service at +44(0)1794525400.

Requirements for Shipping Cyclon Product Assembled Into Multicell Batteries

- Assembled batteries must have short circuit protection during shipping.
- Exposed terminals, connectors, or lead wires must be insulated with a durable inert material to prevent exposure during shipping.

SECTION VI - Health Hazard Data

Routes of Entry: N/A

Health Hazards (Acute & Chronic): N/A

Emergency & First Aid Procedures: Battery contains acid electrolyte which is absorbed in the separator material. If battery case is punctured, completely flush any released material from skin or eyes with water.

Proposition 65: Warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. Wash hands after handling.

SECTION VII - Precautions for Safe Handling & Use

Steps to be taken in case Avoid contact with acid materials. Use soda ash or lime to neutralize material released or spilled: Flush with water.

Waste Disposal Method: Dispose of in accordance with Federal, State, & Local Regulations. Do not incinerate. Batteries should be shipped to a reclamation facility for recovery of the metal and plastic components as the proper method of waste management. Contact distributor for appropriate product return procedures.

SECTION VIII - Control Measures - Not Applicable

SECTION IX – Transportation, Shipping and Handling

DMS technologies' 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, DMS technologies' 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". (3) The battery is capable of withstanding vibration and pressure differential tests specified in 49 CFR § 173.159(d). (4) At a temperature of 55 °C (131°F), the battery must not contain any unabsorbed free-flowing liquids, and is designed so that electrolyte will not flow from a ruptured or cracked case.

DMS technologies' 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 DMS technologies' Romsey location, will be properly labelled 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 labelling.

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".

Per 42 USC Section 14322 (US Code Title 42 – The Public Health and Welfare), packaging must be marked with the following: "Contains Sealed Lead Battery" and "Battery Must Be Recycled".

RedFlash™ is a trademark of DMS technologies

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SECTION X - Additional Information

The DMS technologies' 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 by DMS technologies, as to the absolute correctness or sufficiency of any representation contained herein and DMS technologies 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.

N/A or Not Applicable - Not applicable for finished product used in normal conditions.

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