# TELEDYNE BATTERY PRODUCTS
## MATERIAL SAFETY DATA SHEET
## BATTERY FLUID (ELECTROLYTE)

*THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.*

*VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSON PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF REASONABLE SAFETY PROCEDURES ARE FOLLOWED. FURTHERMORE, VENDEE ASSUMES THE RISK IN THIS USE OF THE MATERIAL.*

**CONTRACT/ORDER NO.:----------**
**NATIONAL STOCK NO.:----------**
**SPECIFICATION REFERENCE NO.:----------**
**DATE PREPARED**: March 2006

**HAZARD RATING:**
**HEALTH----------3**
**FLAMMABILITY----------0**
**REACTIVITY----------2**
**PERSONAL PROTECTION-----D**

## SECTION I: PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME:** **TELEDYNE BATTERY PRODUCTS**

**ADDRESS:** 840 WEST BROCKTON AVENUE
REDLANDS, CA 92374

**TELEPHONE:** 909-793-3131

**24-HOUR EMERGENCY CONTACT: INFOTRAC 1-800-535-5053**

**TRADE NAME:** BATTERY ELECTROLYTE, VARIOUS GRADES

**SYNONYMS:** SULFURIC ACID

**FORMULA:** $H_2SO_4$

**DOT DESCRIPTION:** CONSUMER COMMODITY ORM-D

**INTENDED USE:** ELECTROLYTE FOR LEAD-ACID BATTERIES

## SECTION II: HAZARDOUS INGREDIENTS

| MATERIAL OR COMPONENT | CAS # | WEIGHT % | OSHA PEL | ACGIH TLV | OSHA ACTION LEVEL |
|---|---|---|---|---|---|
| Sulfuric acid | 7664-93-9 | <50 | 1 mg/m$^3$ | 1 mg/m$^3$ | Not Applicable |

# SECTION III: PHYSICAL DATA

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|---|---|---|---|
| **BOILING POINT:** @ 760 mmHg | 203 ºF (95 ºC) | **MELTING POINT:** | N/A |
| **SPECIFIC GRAVITY:** | 1.22 to 1.40 | **VAPOR PRESSURE:** | < 1 mmHg @ 70 ºF |
| **VAPOR DENSITY:** | >1 | **SOLUBILITY:** | 100% |
| **% VOLATILES BY VOL.:** | N/A | **EVAPORATION RATE:** | <1 |

**APPEARANCE AND ODOR:** CLEAR LIQUID, NO ODOR.

# SECTION IV: HEALTH HAZARD INFORMATION

## ROUTES OF EXPOSURE

**INHALATION:** INHALATION OF ELECTROLYTE CAN CAUSE BURNS IN THE UPPER RESPIRATORY TRACT. LUNG IRRITATION AND PULMONARY EDEMA MAY OCCUR.

**SKIN CONTACT:** ELECTROLYTE MAY CAUSE BURNS OR LOCALIZED IRRITATION.

**EYE CONTACT:** ELECTROLYTE MAY CAUSE IRRITATION, CORNEAL BURNS AND CONJUNCTIVITIS. BLINDNESS OR SEVERE OR PERMANENT INJURY MAY RESULT.

**INGESTION:** ELECTROLYTE MAY CAUSE BURNS TO THE MOUTH, ESOPHAGUS AND STOMACH.

## EFFECTS OF OVEREXPOSURE

**ACUTE OVEREXPOSURE:** SULFURIC ACID MAY CAUSE IRRITATION TO THE EYES, NOSE AND THROAT. DIFFICULTY IN BREATHING MAY BE EXPERIENCED. ACID SPLASHED IN THE EYES OR ON THE SKIN MAY CAUSE BURNS OR IRRITATION.

**CHRONIC OVEREXPOSURE:** REPEATED PROLONGED EXPOSURE TO DILUTE SULFURIC ACID MAY CAUSE IRRITATION OF THE SKIN. REPEATED OR PROLONGED EXPOSURE TO MIST OR VAPORS OF SULFURIC ACID MAY CAUSE EROSION OF THE TEETH, CHRONIC IRRITATION OF THE EYES OR CHRONIC INFLAMMATION TO THE NOSE, THROAT AND BRONCHIAL TUBES.

| **CARCINOGENICITY** | IARC | NTP | OSHA |
|---|---|---|---|
| Sulfuric acid | X | | |

## EMERGENCY AND FIRST AID PROCEDURES

**EYES:** WASH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, LIFTING THE LOWER AND UPPER LIDS CONTINUOUSLY. GET MEDICAL ATTENTION.

**SKIN:** IMMEDIATELY FLUSH THE EXPOSED AREA OF THE SKIN WITH LARGE AMOUNTS OF WATER. REMOVE ANY CONTAMINATED CLOTHING AND SHOES (THIS CAN BE DONE WHILE UNDER SHOWER). GET MEDICAL ATTENTION.

**INHALATION:** REMOVE EMPLOYEE FROM AREA OF EXPOSURE TO FRESH AIR. IF PERSON IS NOT BREATHING AND HAS NO PULSE, PERFORM CPR. KEEP VICTIM WARM AND AT REST. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET IMMEDIATE MEDICAL ATTENTION.

**INGESTION:** GIVE EMPLOYEE LARGE AMOUNTS OF WATER IF CONSCIOUS. DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION.

## SECTION V: FIRE AND EXPLOSION DATA

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|---|---|
| **FLASH POINT:** | N/A |
| **AUTO IGNITION TEMPERATURE:** | N/A |
| **FLAMMABLE LIMITS IN AIR (% BY VOL):** | N/A |
| **EXTINGUISHING MEDIA:** | USE DRY CHEMICAL OR CO2 EXTINGUISHER FOR SMALL FIRES. WATER FOG FOR LARGE FIRES. |
| **SPECIAL FIRE FIGHTING PROCEDURES:** | N/A |

## SECTION VI: REACTIVITY DATA

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|---|---|
| **CONDITIONS CONTRIBUTING TO INSTABILITY:** | NONE |
| **INCOMPATIBILITY:** | CONTACT OF ELECTROLYTE WITH ORGANIC MATERIAL.. |
| **HAZARDOUS DECOMPOSITION PRODUCTS:** | SULFURIC ACID MIST, SULFUR DIOXIDE AND CARBON MONOXIDE MAY BE RELEASED WHEN ELECTROLYTE DECOMPOSES. |
| **CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:** | WILL NOT OCCUR |

## SECTION VII: SPILL OR LEAK PROCEDURES

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|---|---|
| **STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:** | ELECTROLYTE SHOULD BE ABSORBED WITH A NON-ORGANIC TYPE ABSORBENT SUCH AS DRY SAND OR EARTH. AVOID DILUTION WITH WATER. |
| **NEUTRALIZING CHEMICALS:** | USE SODA ASH OR BAKING SODA TO NEUTRALIZE ELECTROLYTE. |
| **WASTE DISPOSAL METHODS:** | ELECTROLYTE SHOULD BE HAULED TO A PERMITTED TREATMENT FACILITY. |

## SECTION VIII: SPECIAL PROTECTION INFORMATION

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|---|---|
| **VENTILATION REQUIREMENTS:** | BATTERY CHARGING AREAS MUST BE ADEQUATELY VENTILATED TO KEEP VAPOR AND MIST CONCENTRATIONS BELOW EXPOSURE LIMITS. DESIGN CRITERIA FOR VENTILATION SYSTEMS ARE CONTAINED IN THE INDUSTRIAL VENTILATION MANUAL PUBLISHED BY THE ACGIH. |

**SPECIFIC PERSONAL PROTECTIVE EQUIPMENT**

| | |
|---|---|
| **RESPIRATORY:** | UNDER NORMAL CONDITIONS OF USE RESPIRATORY PROTECTION IS NOT REQUIRED. HOWEVER, SHOULD CONDITIONS ARISE WHERE RESPIRATORS ARE NEEDED, USE ONLY NIOSH/MSHA RESPIRATORS APPROVED FOR DUST, FUME AND MIST. |
| **EYE:** | CHEMICAL GOGGLES, FULL FACE SHIELD. |
| **SKIN:** | GLOVES APPROVED FOR SULFURIC ACID. |
| **OTHER:** | ACID RESISTANT APRON. |

# SECTION IX: SPECIAL PRECAUTIONS

### PRECAUTIONARY STATEMENTS:

AVOID THE USE OF NON-INSULATED TOOLS. IF THEY ARE REQUIRED, TAKE CARE NOT TO MAKE A CONNECTION BETWEEN THE TWO BATTERY TERMINALS AS SEVERE SPARKING MAY OCCUR WHICH COULD RESULT IN AN EXPLOSION. RINGS, METAL WATCH BANDS, NECKLACES AND OTHER JEWELRY SHOULD BE REMOVED WHILE SERVICING BATTERIES.

SUFFICIENT VENTILATION SHOULD BE PROVIDED IN ALL WORK AREAS TO PREVENT A BUILD UP OF DANGEROUS GASES. IF THE
BATTERY ROOM IS AIR CONDITIONED AS PART OF AN OVERALL BUILDING SYSTEM, THE EXHAUST AIR FROM THE BATTERY ROOM SHOULD NOT BE RETURNED TO THE AIR DISTRIBUTION SYSTEM. THE ROOM SHOULD HAVE ITS OWN EXHAUST SYSTEM CONNECTED DIRECTLY TO OUTSIDE AIR. HYDROGEN AND OXYGEN GASES ARE PRODUCED DURING NORMAL BATTERY OPERATION, ESPECIALLY DURING CHARGING. HYDROGEN GAS IS LIGHTER THAN AIR, COLORLESS, ODORLESS AND TASTELESS, THEREFORE IT IS DIFFICULT TO DETECT WITHOUT SPECIAL EQUIPMENT. ALWAYS ASSUME THAT SMALL AMOUNTS OF GASES ARE PRESENT AND TAKE ALL NECESSARY PRECAUTIONS.

# SECTION X: OTHER WARNINGS

### PROPOSITION 65

N/A

### SARA TITLE III

THE CHEMICALS LISTED BELOW ARE TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

| MATERIAL OR COMPONENT | CAS # | WEIGHT % |
|---|---|---|
| Sulfuric acid | 7664-93-9 | <50 |

THIS INFORMATION SHOULD BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

**UPDATED BY:** JESUS BUENO LUNA, ENVIRONMENTAL / HEALTH AND SAFETY COORDINATOR
**DATE:** **MARCH** 2006