MATERIAL SAFETY DATA SHEET

FLOODED LEAD-ACID MOTORCYCLE BATTERIES
FLOODED AND DRY CHARGED

SECTION 1: PRODUCT IDENTIFICATION

Product Name:	Flooded Lead-acid Motorcycle Batteries: Conventional and High Performance Series
Common Synonyms:	Dry charged battery
DOT Description:	NONE
Chemical Family:	Electrical Battery Started
Company Name:	FULBAT SPRL
Address:	ZI DE LA MARTINOIRE BD DE L EUROZONE 7700 MOUSCRON BELGIUM
Contact:	Website : www.fulbat.com Information contact : +33 6 16 75 04 59
Emergency Number:	CHEMTREC (US, Canada & Mexico) Phone: 1-800-424-9300 CHEMTREC (International) Phone: 1-703-527-3887
Date Issued:	February 1, 2012

SECTION 2: HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION

COMPONENTS	Approx % by Wt.	CAS Number	Air Exposure Limits (μg/m 3)			LD_{50} ORAL（Rat） (mg/kg)
			ACGIH TLV-TWA	OSHA PEL	NIOSH REL	
Inorganic Lead/Lead Compounds	85-90	7439-92-1	50	50	50	500
Tin（Sn）	<0.2	7440-31-5	2000	2000	2000	--
Antimony (Sb)	1-3	7440-36-0	500	500	--	--
Arsenic(As)	0.04-0.06	7440-38-2	10	10	--	763
Case Material: Acrylonitrile Butadiene Styrene (ABS) Polypropylene (PP)	~10	9003-56-9 9003-07-0	--	--	--	--

SECTION 3: PHYSICAL DATA

COMPONENTS	DENSITY g/cm^3	MELTING/BOILING (M/B) POINT	SOLUBILITY (H2O)	ODOR	APPEARANCE
Lead	11.34	327.46 °C, 621.43 °F (M)	None	None	Sliver-Gray Metal
Lead Sulfate	6.20	1170 °C, 2138 °F (B)	40 mg/l (15 °C, 59 °F)	None	White crystals or powder
Lead Dioxide	9.40	290 °C, 554 °F (M)	None	None	Dark brown Powder
Case Material: Acrylonitrile Butadiene Styrene (ABS) Polypropylene (PP)	ABS:1.05-1.06 PP:0.9-0.91	ABS: 130-160°C 266°F - 320°F (M) PP:165-170°C 329°F - 338°F (M)	None	None	Solid

SECTION 4: FLAMMABILITY DATA

COMPONENTS	FLASHPOINT	EXPLOSIVE LIMITS	COMMENTS
Lead	None	None	None
Acrylonitrile Butadiene Styrene (ABS) Polypropylene (PP)	None	PP:20g/cm^3	To ABS: Temperatures over 300°C (572°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus. To PP: Temperatures over 380°C (716°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

SECTION 5: REACTIVITY DATA

COMPONENT	Lead/lead compounds
Stability	Stable
Incompatibility	Potassium, carbides, sulfides, peroxides, phosphorus, sulfurs, ketone, ester, petrolatum
Decomposition products	Oxides of lead and sulfur.
Condition to avoid	High temperature, Sparks and other sources of ignition.

SECTION 6: HEALTH HAZARD DATA

Battery is considered as sealed non-spillable one. Under normal operating conditions, the materials sealed inside should not be hazardous to people's health. Only when these materials exposed during production or under case broken condition or being extremely heated (fired), they may be hazardous to people's health.

Routes of Entry:
Sulfuric Acid: Harmful by all routes of entry.
Lead Compounds: Hazardous Exposure can occur only when product is heated, oxidized, or otherwise processed or damaged to create dust, vapor or fume.

Inhalation:
Sulfuric Acid: Breathing sulfuric acid vapors and mists may cause severe respiratory problems.
Lead Compounds: Dust or fumes may cause irritation of upper respiratory tract or lungs.

Skin Contact:
Sulfuric Acid: Severe irritation, burns and ulceration.
Lead Compounds: Not absorbed through the skin.

Ingestion:
Sulfuric Acid: May cause severe irritation of the mouth, throat, esophagus, and stomach.
Lead Compounds: May cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. Acute ingestion should be treated by a physician.

Acute Health Hazards:
Sulfuric Acid: Severe skin irritation, burns, damage to cornea may cause blindness, upper respiratory irritation.
Lead Compounds: May cause abdominal pain, nausea, headaches, vomiting, loss of appetite, severe cramping, muscular aches and weakness, and difficulty sleeping. The toxic effects of lead are cumulative and slow to appear. It affects the kidneys, reproductive and central nervous systems. The symptoms of lead overexposure are listed above. Exposure to lead from a battery most often occurs during lead reclamation operations through the breathing or ingestion of lead dust or fumes.

Chronic Health Hazards:
Sulfuric acid: Possible scarring of the cornea, inflammation of the nose, throat and bronchial tubes, possible erosion of tooth enamel.
Lead Compounds: May cause anemia, damage to kidneys and nervous system, and damage to reproductive system in both males and females.

Medical Conditions Generally Aggravated by Exposure
Inorganic lead and its compounds can aggravate chronic forms of kidney, liver, and neurological diseases. Contact of battery electrolyte (acid) with the skin may aggravate skin diseases such as eczema and contact dermatitis. Overexposure to sulfuric acid mist may case lung damage and aggravate pulmonary conditions.

Emergency and First Aid Procedures
Inhalation
Sulfuric Acid: Remove to fresh air immediately. If breathing is difficult, give oxygen
Lead Compounds: Remove from exposure, gargle, wash nose and lips, consult physician
Ingestion
Sulfuric Acid: Do not induce vomiting, consult a physician immediately.
Lead Compounds: Consult a physician immediately
Eyes
Sulfuric Acid: Flush immediately with water for 15 minutes, consult a physician.
Lead Compounds: Flush immediately with water for 15 minutes, consult a physician
Skin
Sulfuric Acid: Flush with large amounts of water for at least 15 minutes, remove any contaminated clothing. If irritation develops seek medical attention.
Lead Compounds: Wash with soap and water.
Proposition 65
Warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemical 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 7: CARCINOGENICITY

Carcinogenicity
Lead Compounds: Human studies are inconclusive regarding lead exposure and an increased cancer risk. The EPA and the International Agency for Research on Cancer (IARC) have categorized lead and inorganic lead compounds as a B2 classification (probable/possible human carcinogen) based on sufficient animal evidence and inadequate human evidence.

SECTION 8: PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or Leak Procedures
Lead dust should be vacuumed or wet swept into a D.O.T. approved container. Use controls that minimize fugitive emissions; do not use compressed air. Contact local and /or state environmental officials for proper disposal requirement.

Waste Disposal Method
Spent Batteries - send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations
Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable.
A copy of this MSDS must be supplied to any scrap dealer or secondary lead smelter with the battery. Or, consult state environment agency and/ or federal EPA.

Handling and Storing
Store batteries in a cool, dry, well ventilated area that are separated from incompatible materials and any activities which may generate flames, sparks, or heat. Place cardboard between layers of stacked batteries to avoid damage and short circuits.
Battery should be stored under roof for protection against adverse weather conditions. Store and handle only in areas wit adequate water supply. Avoid damage to battery case.

SECTION 9: ECOLOGICAL INFORMATION

Lead and its compounds can pose a threat if released to the environment. See Waste Disposal Method in Section 8.

SECTION 10: CONTROL MEASURES

Engineering Controls:
Store and handle in well-ventilated area. General dilution ventilation is acceptable.

Work Practices:
Handle batteries cautiously to avoid damaging the case. Avoid contact with internal components. Do not allow metallic articles to contact the battery terminals during handling. Wear protective clothing when filling or handling batteries. Wash hands after handling.

Respiratory Protection:
None required under normal conditions.

Personal Protection and Equipment: None needed under normal conditions. If battery case is damaged,

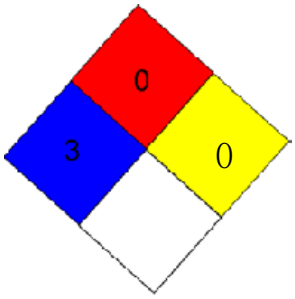
- Protective gloves: use rubber or plastic acid-resistant gloves with elbow-length gauntlet.
- Eye protection: use chemical goggles or face shield.
- Other protection: None required under normal use conditions when handling dry batteries.

SECTION 11: NFPA HAZARD RATING FOR LEAD

A. Not applicable under normal conditions.

B. Incase of damage resulting in breakage of the battery container, see section10, personal protection and equipment.

Flammability (Red)	0
Health (Blue)	3
Reactivity (Yellow)	0



SECTION 12: TRANSPORTATION REGULATIONS (Non-Restricted Status)

GROUND-US DOT: No proper shipping name; not regulated as a hazardous material.

The transportation of dry batteries (those batteries that contain no electrolyte or residue) is NOT regulated by the U.S.DOT as a hazardous material.

AIRCRAFT-ICAO-IATA: No proper shipping name; not regulated as a hazardous material.

The international transportation of dry batteries is NOT regulated by the international Air Transport Association (IATA) as a hazardous material.

VESSEL-IMO-IMDG: No proper shipping name; not regulated as a hazardous material.

The international transportation of dry batteries is NOT regulated by the international Maritime Dangerous Goods Code (IMDG) as a hazardous material.

SECTION 13: REGULATORY INFORMATION

RCRA
Spent dry batteries are not regulated as hazardous waste by the EPA when recycled, however state and international regulations may vary.

CERCLA (superfund) and EPCRA
(a) EPCRA Section 312 Tier 2 reporting is required for batteries if lead is present in quantities of 10,00lbs.or more.
(b) Supplier Notification: This product contains toxic chemicals which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39 the following information is provided to enable you to complete the required reports:

Toxic Chemical	CAS Number	Approximate% by weight
Lead	7439-92-1	85-90
Arsenic	7440-38-2	0.04-0.06

Antimony	7429-90-5	1-3

If you distribute this product to other manufacturers in SIC codes 20 through 39, this information must be provided with the first shipment in a calendar year. The Section 313 supplier notification requirement does not apply to batteries which are "consumer products". Not present in all battery types. Contact **FULBAT SPRL** for further information.

TSCA

Ingredients in FULBAT's batteries are listed in the TSCA registry as follows:

Components	CAS Number	TSCA Status
Inorganic Lead Compound: Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO4)	7446-14-2	Listed
Antimony (Sb)	7440-36-0	Listed
Tin (Sn)	7440-31-5	Listed
Arsenic (As)	7440-38-2	Listed

CANANIN REGULATIONS:
All chemical substances in this product are listed on the CEPA DSL/NDSL or are exempt from list requirements.

DISCLAIMER:

ALL PERSONS USING THIS PRODUCT, ALL PERSONS WORKING IN AN AREA WHERE THIS PRODUCT IS USED AND ALL PERSONS HANDLING THIS PRODUCT SHOULD BE FAMILIAR WITH THE CONTENTS OF THIS DATA SHEET. THIS INFORMATION SHOULD BE EFFECTIVELY COMMUNICATED TO EMPLOYEES AND OTHERS WHO MIGHT COME IN CONTACT WITH THE PRODUCT.

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