

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Product name : Wet Flooded Lead-Acid Battery  
Product code : YBX1000, 3000, 5000, 7000, Cargo, Marine, Leisure, Garden & Pro-Spec Series Batteries

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : Automotive Electric Storage Battery

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Yuasa Battery Sales (UK) Ltd  
Unit 13, Hunts Rise, South Marston Industrial Park  
SN4TG Swindon  
T +44-8708-500259 - F +44-8708-500317  
email: matt.jordan@yuasaeurope.com

**1.4. Emergency telephone number**

Emergency number : +44(0)1793833562 (09:00 – 17:00 Monday to Friday)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Acute Tox. 4 (Inhalation:dust,mist) H332  
Skin Corr. 1A H314  
Repr. 1A H360Fd  
STOT RE 1 H372  
Aquatic Acute 1 H400  
Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

**Classification according to Directive 67/548/EEC or 1999/45/EC**

Repr.Cat.1; R60  
Repr.Cat.1; R61  
Xn; R48/20/21  
C; R35  
N; R50/53

Full text of R-phrases: see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H314 - Causes severe skin burns and eye damage  
H332 - Harmful if inhaled  
H360Fd - May damage fertility. Suspected of damaging the unborn child  
H372 - Causes damage to organs through prolonged or repeated exposure  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
 P264 - Wash ... thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area

### 2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

other hazards which do not result in classification : Lead may be toxic to blood, kidneys, central nervous system.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Lead	(CAS No) 7439-92-1 (EC no) 231-100-4	66 - 68	Repr.Cat.1; R60 Repr.Cat.1; R61 Xn; R48/20/22 N; R50/53
Sulfuric acid	(CAS No) 7664-93-9 (EC no) 231-639-5 (EC index no) 016-020-00-8	20 - 23	C; R35
Polypropylene substance with national workplace exposure limit(s) (LT, LV)	(CAS No) 9003-07-0 (EC no) 618-352-4	7 - 10	Not classified
Antimony substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, ES, ET, FI, FR, GB, GR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SK, SL)	(CAS No) 7440-36-0 (EC no) 231-146-5	0.5 - 1.5	Not classified
Name	Product identifier	Specific concentration limits	
Sulfuric acid	(CAS No) 7664-93-9 (EC no) 231-639-5 (EC index no) 016-020-00-8	(15 =< C) C;R35 (5 =< C < 15) Xi;R36/38	
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lead	(CAS No) 7439-92-1 (EC no) 231-100-4	66 - 68	Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
Sulfuric acid	(CAS No) 7664-93-9 (EC no) 231-639-5 (EC index no) 016-020-00-8	20 - 23	Skin Corr. 1A, H314
Polypropylene substance with national workplace exposure limit(s) (LT, LV)	(CAS No) 9003-07-0 (EC no) 618-352-4	7 - 10	Not classified
Antimony substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, ES, ET, FI, FR, GB, GR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SK, SL)	(CAS No) 7440-36-0 (EC no) 231-146-5	0.5 - 1.5	Not classified
Name	Product identifier	Specific concentration limits	
Sulfuric acid	(CAS No) 7664-93-9 (EC no) 231-639-5 (EC index no) 016-020-00-8	(15 =< C) Skin Corr. 1A, H314 (5 =< C < 15) Skin Irrit. 2, H315 (5 =< C < 15) Eye Irrit. 2, H319	

Full text of R-, H- and EUH-phrases: see section 16

**Note:** In normal usage there is no risk to people or the environment from handling and using this article. It is only in the exceptional case of an accident or severe damage that there may be minimal exposure to the constituent materials listed above.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : If a battery ruptures, move to fresh air in case of accidental inhalation of mist. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
- First-aid measures after skin contact : Rinse immediately with plenty of water for 15 minutes. Remove contaminated clothing, including shoes, after flushing has begun. If a battery ruptures, do not rub or scratch exposed skin.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If battery ruptures, do not rub or scratch exposed eye.

First-aid measures after ingestion : If solution of a battery chemicals have been swallowed and the person is conscious, give one glass of water. Do NOT induce vomiting. Vomiting may occur spontaneously. Never give anything by mouth to an unconscious person. Get immediate medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : If a battery ruptures, may be harmful or fatal if inhaled in a confined area. May cause severe irritation and burns of the nose, throat and respiratory tract.

Symptoms/injuries after skin contact : Direct contact with internal components of a battery can be severely irritating to the skin and may result in redness, swelling, burns and severe skin damage. Skin contact may aggravate an existing dermatitis condition. Skin contact may aggravate dermatitis.

Symptoms/injuries after eye contact : If a battery ruptures, direct contact with the liquid or exposure to vapours or mists may cause tearing, redness, swelling, corneal damage and irreversible eye damage. May cause severe burns.

Symptoms/injuries after ingestion : Severe irritation or burns to the mouth, throat, oesophagus, and stomach. May be fatal if swallowed.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. If a battery ruptures, use dry chemical, soda ash, lime, sand or carbon dioxide.

Unsuitable extinguishing media : None known.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Lead compounds and sulfuric acid fume may be released during a fire involving the product. Battery may rupture due to pressure buildup when exposed to excessive heat and may be result in the release of corrosive materials.

Reactivity : Stable under normal conditions.

#### 5.3. Advice for firefighters

Protective equipment for firefighters : Use self-contained breathing apparatus and chemically protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection.

Emergency procedures : Evacuate area.

##### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.2. Environmental precautions

No additional information available

#### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Small spills: collect all released material in a plastic lined metal container. . Take up liquid spill into absorbent material or Neutralize with sodium bicarbonate. Large spills: contain liquid using absorbent material, by digging trenches. Take up liquid spill into inert absorbent material, e.g.: sand/earth. Dispose in a safe manner in accordance with local/national regulations.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Protect from physical damage.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Hygiene measures : Do not eat, drink or smoke when using this product.



# Lead-Acid Batteries

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 22/05/2013

Revision date: 22/05/2013

: SDS – Auto Wet Flooded

Version: 1.0

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Provide local exhaust or general room ventilation.  
Storage conditions : Store in a dry, cool and well-ventilated place. Keep away from heat and direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Lead (7439-92-1)		
Austria	MAK (mg/m <sup>3</sup> )	0.4 mg/m <sup>3</sup>
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Cyprus	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
France	VME (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (restrictive limit)
Germany	TRGS 903 (BGW)	400 µg/l (Medium: whole blood - Time: no restriction - Parameter: Lead (women <45 years))
Gibraltar	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Greece	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Italy	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Latvia	OEL TWA (mg/m <sup>3</sup> )	0.005 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.050 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 µg/m <sup>3</sup>
Spain	VLA-ED (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Switzerland	VLE (mg/m <sup>3</sup> )	0.8 mg/m <sup>3</sup>
Switzerland	VME (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	0.45 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (all works)
Hungary	AK-érték	0.15 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Lithuania	IPRV (mg/m <sup>3</sup> )	0.07 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Romania	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Romania	OEL STEL (mg/m <sup>3</sup> )	0.10 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Portugal	OEL chemical category (PT)	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

### Antimony (7440-36-0)

Austria	MAK (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Belgium	Limit value (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
France	VME (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Greece	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>

<b>Antimony (7440-36-0)</b>		
Latvia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Spain	VLA-ED (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Switzerland	VME (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
The Netherlands	MAC TGG 8H (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (calculated)
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Hungary	AK-érték	0.5 mg/m <sup>3</sup>
Hungary	CK-érték	2 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Lithuania	IPRV (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Romania	OEL TWA (mg/m <sup>3</sup> )	0.20 mg/m <sup>3</sup>
Romania	OEL STEL (mg/m <sup>3</sup> )	0.50 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	0.25 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>

<b>Polypropylene (9003-07-0)</b>		
Latvia	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Lithuania	IPRV (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

<b>Sulfuric acid (7664-93-9)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Austria	MAK (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Belgium	Limit value (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Belgium	Short time value (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	1.0 mg/m <sup>3</sup>
Cyprus	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
France	VLE (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
France	VME (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Gibraltar	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (when selecting an appropriate exposure monitoring method, account should be taken of potential limitations and interferences that may arise in the presence of other sulphur compounds)
Greece	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Latvia	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

Sulfuric acid (7664-93-9)		
Spain	VLA-ED (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (indicative limit value; it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound; limitations and interferences can arise from other Sulfur compounds)
Switzerland	VLE (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Switzerland	VME (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
The Netherlands	MAC TGG 8H (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (concentrated)
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (thoracic fraction)
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min)	1 mg/m <sup>3</sup>
Hungary	AK-érték	0.05 mg/m <sup>3</sup>
Hungary	CK-érték	1 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Lithuania	IPRV (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Lithuania	TPRV (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Malta	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (mist)
Norway	Gjennomsnittsverdier (AN) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (Kortidsverdi) (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Romania	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Canada (Quebec)	VECD (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
Portugal	OEL chemical category (PT)	A2 - Suspected Human Carcinogen present in strong inorganic acid mixtures

## 8.2. Exposure controls

Appropriate engineering controls : Mechanical ventilation is recommended. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection.



Hand protection : Wear suitable gloves tested to EN374.

Eye protection : Chemical goggles or face shield with safety glasses. DIN EN 166.

Skin and body protection : Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Wear a respirator conforming to EN140 with Type A/P2 filter or better.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Off-white cloudy liquid with solid object.

Colour : No data available

odour : No data available

Odour threshold	: No data available
pH	: < 1 (sulfuric acid)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 327.5 °C (Lead)
Freezing point	: No data available
Boiling point	: 1740 °C (Lead at 1013hPa)
Flash point	: Non-flammable
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Vapour pressure at 50 °C	: 1.33 hPa (Lead at 373 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 11.34 g/m <sup>3</sup> (Lead)
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive
Oxidising properties	: Not oxidizing
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

Stable at normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Overcharging. Remove all sources of ignition. If battery ruptures, avoid contact with organic materials and alkaline materials. Mechanical impact.

### 10.5. Incompatible materials

If battery ruptures, avoid contact with organic materials and alkaline materials. If battery ruptures, avoid contact with organic materials and alkaline materials.

### 10.6. Hazardous decomposition products

Lead compounds and sulfuric acid fumes may be released during a fire involving the product.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

#### Antimony (7440-36-0)

LD50 oral rat	7 g/kg
ATE (oral)	7000.000 mg/kg

#### Sulfuric acid (7664-93-9)

LD50 oral rat	2140 mg/kg
LC50 inhalation rat (mg/l)	510 mg/m <sup>3</sup> (Exposure time: 2 h)
LC50 inhalation rat (ppm)	347 ppm (Exposure time: 1 h)

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
pH: < 1 (sulfuric acid)



# Lead-Acid Batteries

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 20/05/2013

Revision date:

Version: 1.0

Serious eye damage/irritation	: Eye damage, category 1, implicit pH: < 1 (sulfuric acid)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility. Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Lead (7439-92-1)

LC50 fishes 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 1	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

#### Sulfuric acid (7664-93-9)

LC50 fishes 1	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	29 mg/l (Exposure time: 24 h - Species: Daphnia magna)

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### Sulfuric acid (7664-93-9)

BCF fish 1	(no bioaccumulation)
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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### Lead-Acid Batteries

PBT: not yet assessed

vPvB: not yet assessed

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: Dispose of contents/container to comply with applicable local, national and international regulations.
Waste treatment methods	: Recycling the product is recommended. Waste must be disposed of in accordance with federal, state, and local environmental control regulations.
Waste disposal recommendations	: Consult the appropriate local waste disposal expert about waste disposal. Consult the manufacturer or supplier for information regarding recovery and recycling of the product. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No	: 2794
UN-No.(IATA)	: 2794

### 14.2. UN proper shipping name

Proper shipping name	: BATTERIES, WET, FILLED WITH ACID
Transport document description	: UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, (E)



**14.3. Transport hazard class(es)**

Class (UN) : 8  
Class (IATA) : 8 - Corrosives  
Hazard labels (UN) : 8

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Dangerous for the environment :



Other information : No supplementary information available.

**14.6. Special precautions for user****14.6.1. Overland transport**

Hazard identification number (Kemler No.) : 80  
Classification code (UN) : C11  
Orange plates :



Special provision (ADR) : 295, 598  
Transport category (ADR) : 3  
Tunnel restriction code : E  
Limited quantities (ADR) : 1L  
Excepted quantities (ADR) : E0  
EAC code : 2R

**14.6.2. Transport by sea**

Transport regulations (IMDG) : Subject to the provisions  
Limited quantities (IMDG) : 1L  
EmS-No. : F-A, S-B  
Special Provision : 295

**14.6.3. Air transport**

Transport regulations (ICAO) : Subject to the provisions  
Instruction "cargo" (ICAO) : 870  
Instruction "passenger" (ICAO) : 870  
Instruction "passenger" - Limited quantities (ICAO) : Forbidden

**14.6.4. Inland Waterway (ADN)**

Transport regulations (ADN) : Subject to the provisions  
Dangers (ADN) : Not applicable

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**



# Lead-Acid Batteries

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 20/05/2013

Revision date:

Version: 1.0

No REACH Annex XVII restrictions

Contains no REACH candidate substance

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 1A	Reproductive toxicity, Category 1A
Skin Corr. 1A	skin corrosion/irritation Category 1A
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled
H360	May damage fertility or the unborn child
H360Fd	May damage fertility. Suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R35	Causes severe burns
R48/20/21	Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin
R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R60	May impair fertility
R61	May cause harm to the unborn child
C	Corrosive
N	Dangerous for the environment
Xn	Harmful

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*