

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Article
Product name	: LEAD ACID BATTERY, WET, FILLED WITH ACID
Product code	: YBX1000, 3000, 5000, 7000, Cargo, Marine, Leisure, Garden & Pro-Spec, YuMicron, 6V & 12V Conventional, HJ Series HJ-S34B20L, HJ-S34B20L-A, HJ-S34B20R, HJ-S46B24L(S), HJ-S46B24R, HJ-S55D23L, HJ-S55D23R-B, HJ-S65D26L-B & HJ-S75D31L.
Other means of identification	: Batteries wet filled with acid, electric storage, Conventional, Enhanced Flood Batteries, Idle-Stop-Start wet 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	: Starting, ignition for car, truck & motorcycle's
------------------------------	--

##### 1.2.2. Uses advised against

Restrictions on use	: Anything other than the above
---------------------	---------------------------------

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

Only representative:  
Europark Fichtenhain B 17  
47807 Krefeld  
Germany  
Telephone: +49 (0) 2151 82095 00  
E-mail: info@gs-yuasa.de

Supplier:  
GS Yuasa Battery Europe Limited  
Unit 22 Rassau Industrial Estate  
Ebbw Vale, Gwent  
Telephone: +44 (0) 1495 350121  
E-mail: tech.info@gs-yuasa.uk

#### 1.4. Emergency telephone number

Emergency number	: United Kingdom GS Yuasa Battery Sales UK Ltd. Telephone: (+44) 01793-833-560 E-mail: matthew.elwick@gs-yuasa.uk Language: English language only Monday - Friday 9:00am – 5:00pm (09:00 - 17:00)
------------------	--

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1A	H314
Eye Dam. 1	H318
Repr. 1A	H360
Lact.	H362
STOT RE 1	H372
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Full text of hazard classes, H- and EUH-statements: see section 16

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### 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)



GHS05

GHS07

GHS08

GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

- : H302+H332 - Harmful if swallowed or if inhaled.
- H314 - Causes severe skin burns and eye damage.
- H360 - May damage fertility or the unborn child.
- H362 - May cause harm to breast-fed children.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H410 - Very toxic to aquatic life with long lasting effects.
- : P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
- P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P310 - Immediately call a POISON CENTER or doctor.

Precautionary statements (CLP)

## 2.3. Other hazards

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

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lead (Pb) substance listed as REACH Candidate (Lead) substance with a Community workplace exposure limit	CAS-No.: 7439-92-1 EC No.: 231-100-4 EC index No.: 082-013-00-1	44 – 90	Repr. 1A, H360FD Lact., H362 STOT RE 1, H372 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=10)
sulphuric acid ... %	CAS-No.: 7664-93-9 EC No.: 231-639-5 EC index No.: 016-020-00-8 REACH-no: 01-2119458838-20	21 – 47	Skin Corr. 1A, H314

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lead dioxide	CAS-No.: 1309-60-0 EC No.: 215-174-5	30 – 45	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Inhalation:vapour), H332 Repr. 1A, H360 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Lead sulphate	CAS-No.: 7446-14-2 EC No.: 231-198-9	0.5 – 1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Repr. 1A, H360 STOT RE 2, H373 Aquatic Chronic 1, H410
Tin substance with a Community workplace exposure limit	CAS-No.: 7440-31-5 EC No.: 231-141-8 EC index No.: 231-141-8	< 1	Not classified
Antimony (Sb)	CAS-No.: 7440-36-0 EC No.: 231-146-5	0.1 – 1	Repr. 1A, H360 Lact., H362 Aquatic Chronic 3, H412

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
Lead (Pb)	CAS-No.: 7439-92-1 EC No.: 231-100-4 EC index No.: 082-013-00-1	( 0.03 ≤C ≤ 100) Repr. 1A, H360D
sulphuric acid ... %	CAS-No.: 7664-93-9 EC No.: 231-639-5 EC index No.: 016-020-00-8 REACH-no: 01-2119458838-20	( 5 ≤C < 15) Eye Irrit. 2, H319 ( 5 ≤C < 15) Skin Irrit. 2, H315 ( 15 ≤C ≤ 100) Skin Corr. 1A, H314
Lead sulphate	CAS-No.: 7446-14-2 EC No.: 231-198-9	( 0 <C ≤ 2.5) Repr. 1A, H360

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Those administering first aid treatment should wear suitable protective clothing to prevent exposure (See Section 8).

First-aid measures after inhalation : If a battery ruptures, move to fresh air in case of accidental inhalation of mist. Remove person to fresh air and keep comfortable for breathing. If symptoms develop, obtain medical attention.

First-aid measures after skin contact : Remove contaminated clothing immediately. Immediately call a POISON CENTRE or doctor/physician. Wash immediately with lots of water (15 minutes)/shower.

First-aid measures after eye contact : Rinse immediately with plenty of water (for at least 15 minutes). Ensure that folded skin of eyelids is thoroughly washed with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Give 100 - 200 ml of water to drink. Immediately call a POISON CENTRE or doctor/physician.

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

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

Symptoms/effects	: Causes damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: Harmful if inhaled. If a battery ruptures, may be harmful or fatal if inhaled in a confined area.
Symptoms/effects after skin contact	: Causes severe burns. 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.
Symptoms/effects after eye contact	: Causes serious eye damage. 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.
Symptoms/effects after ingestion	: Harmful if swallowed.
Chronic symptoms	: May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

### 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.
Explosion hazard	: Fire/explosion hazard. Reacts violently with water. Reacts violently with oxidizing substances. Contact with metals could evolve flammable hydrogen gas.
Hazardous decomposition products in case of fire	: May react with combustible substances creating fire or explosion hazard.

### 5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Avoid fire-fighting water entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area. Evacuate unnecessary personnel. Do not get in eyes, on skin, or on clothing.

#### 6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing and eye or face protection. Where excessive dust may result, wear approved mask. Do not get in eyes, on skin, or on clothing. Do not breathe dust.
Emergency procedures	: Ventilate area. Do not get in eyes, on skin, or on clothing.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if large amounts of the product enters sewers or public waters. Do not allow contact with water.

### 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.
-----------------	--

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### 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: Take up liquid spill into absorbent material, e.g.: sand/earth. Dispose in a safe manner in accordance with local/national regulations.

### 6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Precautions for safe handling

: Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapours.

#### Hygiene measures

: Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

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

#### Technical measures

: Take precautionary measures against static discharge. Provide local exhaust or general room ventilation.

#### Storage conditions

: Store in a dry, cool and well-ventilated place. Store away from direct sunlight or other heat sources.

#### Incompatible materials

: Strong bases. Strong acids.

### 7.3. Specific end use(s)

Starting, ignition for car, truck & motorcycle's.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Tin (7440-31-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tin and inorganic tin compounds
IOELV TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Notes	SCOEL Recommendations (2003)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC COMMISSION DIRECTIVE 91/322/EEC
Ireland - Occupational Exposure Limits	
Local name	Tin, as Sn Metal
OEL (8 hours ref) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
OEL (15 min ref) (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> Organic compounds
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Tin
WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> compounds, inorganic, except SnH4, (as Sn4) 0.1 mg/m <sup>3</sup> compounds, organic, except Cyhexatin (ISO), (as Sn)

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

Tin (7440-31-5)	
WEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup> compounds, inorganic, except SnH4, (as Sn4) 0.2 mg/m <sup>3</sup> compounds, organic, except Cyhexatin (ISO), (as Sn)
Lead (Pb) (7439-92-1)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Inorganic lead and its compounds
BOEL TWA	0.15 mg/m <sup>3</sup>
Regulatory reference	DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	Lead and its inorganic compounds
BLV	30 µg/100ml Parameter: Pb
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Ireland - Occupational Exposure Limits	
Local name	Lead and its compounds (except tetraethyl lead)
OEL (8 hours ref) (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Remark	Repr.1A (Substances which are known human reproductive toxicants), BOELV (Binding Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Ireland - Biological limit values	
Local name	Lead and its ionic compounds
BLV	70 µg/100ml Parameter: lead - Medium: blood - Notations: Absorption spectrometry or a method giving equivalent results
Remark	Health surveillance is carried out if: a. exposure to a concentration of lead in air is greater than 0.075mg/m <sup>3</sup> , calculated as a time-weighted average over 40 hours per week, or b. a blood-lead level greater than 40µg Pb/100 ml blood is measured in individual employees.
Regulatory reference	S.I. No. 619/2001 - Safety, Health and Welfare At Work (Chemical Agents) Regulations, 2001
sulphuric acid ... % (7664-93-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Sulphuric acid (mist)
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU
Ireland - Occupational Exposure Limits	
Local name	Sulphuric acid
OEL (8 hours ref) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Sulphuric acid
WEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> mist
Remark (WEL)	The mist is defined as the thoracic fraction
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

Arsenic (7440-38-2)	
Ireland - Biological limit values	
Local name	Arsenic, elemental and soluble inorganic compounds
BLV	35 µg/l Parameter: Inorganic As plus methylated metabolites - Medium: urine - Notations: B (Background)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
United Kingdom - Occupational Exposure Limits	
Local name	Arsenic
WEL TWA (mg/m³)	0.1 mg/m³ and arsenic compounds except arsine (as As)
Remark (WEL)	Carc (Capable of causing cancer and/or heritable genetic damage)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Emergency safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate ventilation to minimise dust concentrations.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### 8.2.2.1. Eye and face protection

##### Eye protection:

Chemical goggles or safety glasses. (EN 166)

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Impervious clothing. EN 13034. Large quantities: EN 14605. Corrosionproof suit

##### Hand protection:

Wear chemically resistant protective gloves according to EN 374-1. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough. Due to the practical application of the refractory products, it is advised to apply gloves according to EN 388 and EN 374-1.

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

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

#### 8.2.2.4. Thermal hazards

##### Thermal hazard protection:

Not required for normal conditions of use.

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment. Do not allow to enter drains or water courses.

#### Other information:

Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures. Contaminated work clothing should not be allowed out of the workplace. Keep away from food, drink and animal feeding stuffs.

## 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	: Off-white.
Odour	: No data available
Odour threshold	: No data available
pH	: < 1 (Sulphuric 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 @ 013hPa)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 1.33 hPa (Lead @ 373 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 11.34 g/m³ (Lead)
Solubility	: Soluble in water. Water: 100 %
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7).

### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation 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 impacts.

### 10.5. Incompatible materials

Strong bases. Strong acids.

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

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

LD50 oral, rat	> 20000 mg/kg bodyweight
LD50 dermal, rat	> 8300 mg/kg bodyweight
LC50 inhalation, rat (mg/l)	5200 mg/m <sup>3</sup> air

#### Tin (7440-31-5)

LD50 oral, rat	> 2000 mg/kg bodyweight
LD50 dermal, rat	> 2000 mg/kg bodyweight

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

LD50 oral, rat	> 2000 mg/kg bodyweight
LD50 dermal, rat	> 2000 mg/kg bodyweight
LC50 inhalation, rat (mg/l)	> 5.05 mg/l (4 hours)

Skin corrosion/irritation	: Causes severe skin burns. pH: < 1 (Sulphuric acid)
Serious eye damage/irritation	: Causes serious eye damage. pH: < 1 (Sulphuric acid)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child. May cause harm to breast-fed children.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.

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

STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
------------------------	---

#### Lead dioxide (1309-60-0)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
------------------------	--

#### Lead sulphate (7446-14-2)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
------------------------	--

Aspiration hazard	: Not classified
-------------------	------------------

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

Antimony (Sb) (7440-36-0)	
LC50 fish	14.4 mg/l - 96 Hours (Pimephales promelas)
EC50 - Other aquatic organisms [1]	NOEC: 1.11 mg/l - 96 Hours (Chlorohydra viridissimus)
NOEC chronic fish	4.5 mg/l - 21 days (Pimephales promelas)
NOEC chronic crustacea	1.74 mg/l - 21 days (Pimephales promelas)

Tin (7440-31-5)	
LC50 fish	> 12.4 µg/l 96 Hours (Salmo gairdneri)

Lead (Pb) (7439-92-1)	
LC50 fish	107 µg/l - 96 Hours (Oncorhynchus mykiss)
EC50 - Other aquatic organisms [1]	NOEC: 3.4 µg/L: 48 Hours (Mytilus trossolus)
NOEC chronic fish	29.3 µg/L - 30 days (Pimephales promelas)
NOEC chronic crustacea	153.8 µg/L - 25 days (Alona rectangula)

Lead dioxide (1309-60-0)	
EC50 Daphnia	2100 µg/l 96 Hours (Daphnia magna)

sulphuric acid ... % (7664-93-9)	
LC50 fish	16 – 28 mg/l - 96 Hours (Lepomis macrochirus)
EC50 Daphnia	> 100 mg/l - 48 Hours (Daphnia magna)
NOEC chronic fish	0.31 mg/l - 213 days (Salvelinus fontinalis)
NOEC chronic crustacea	0.15 mg/l - (Tanytarsus dissimilis)

## 12.2. Persistence and degradability

Antimony (Sb) (7440-36-0)	
Persistence and degradability	Not relevant for inorganic substances.

Tin (7440-31-5)	
Persistence and degradability	Not relevant for inorganic substances.

Lead (Pb) (7439-92-1)	
Persistence and degradability	Not relevant for inorganic substances.

sulphuric acid ... % (7664-93-9)	
Persistence and degradability	Not relevant for inorganic substances.

## 12.3. Bioaccumulative potential

Antimony (Sb) (7440-36-0)	
Bioaccumulative potential	Not relevant for inorganic substances.

Lead (Pb) (7439-92-1)	
Bioaccumulative potential	Not relevant for inorganic substances.

sulphuric acid ... % (7664-93-9)	
Bioaccumulative potential	Not relevant for inorganic substances.

## 12.4. Mobility in soil

No additional information available

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### 12.5. Results of PBT and vPvB assessment

#### Component

Lead (Pb) (7439-92-1)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW) code	: 16 06 01* - lead batteries

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1 UN number

UN-No. (ADR)	: UN 2794
UN-No. (IMDG)	: UN 2794
UN-No. (IATA)	: UN 2794
UN-No. (ADN)	: UN 2794
UN-No. (RID)	: UN 2794

### 14.2. UN proper shipping name

Proper Shipping Name	: BATTERIES, WET, FILLED WITH ACID
Proper Shipping Name (IMDG)	: BATTERIES, WET, FILLED WITH ACID
Proper Shipping Name (IATA)	: Batteries, wet, filled with acid
Proper Shipping Name (ADN)	: BATTERIES, WET, FILLED WITH ACID
Proper Shipping Name (RID)	: BATTERIES, WET, FILLED WITH ACID
Transport document description (ADR)	: UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 2794 Batteries, wet, filled with acid, 8, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)

: 8

Hazard labels

: 8



#### IMDG

Transport hazard class(es) (IMDG)

: 8

Danger labels (IMDG)

: 8

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law



### IATA

Transport hazard class(es) (IATA)

: 8

Danger labels (IATA)

: 8



### ADN

Transport hazard class(es) (ADN)

: 8

Danger labels (ADN)

: 8



### RID

Transport hazard class(es) (RID)

: 8

Danger labels (RID)

: 8



## 14.4. Packing group

Packing group	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

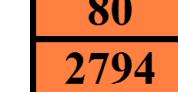
## 14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

## 14.6. Special precautions for user

### Overland transport

Classification code (ADR)	: C11
Special provisions (ADR)	: 295, 598
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P801, P801a
Transport category (ADR)	: 3
Hazard identification number (Kemler No.)	: 80
Orange plates	: 80 2794



Tunnel restriction code (ADR)

: E

EAC code

: 2R

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### Transport by sea

Special provisions (IMDG)	:	295
Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P801
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-B
Stowage category (IMDG)	:	A
Stowage and handling (IMDG)	:	SW16
Segregation (IMDG)	:	SGG1, SG36, SG49
Properties and observations (IMDG)	:	Metal plates immersed in acid electrolyte in a glass, hard rubber or plastics receptacle. When electrically charged, may cause fire through short-circuiting of terminals. Acid electrolyte is corrosive to most metals. Cause burns to skin, eyes and mucous membranes. Used batteries being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport.

### Air transport

PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	870
PCA max net quantity (IATA)	:	30kg
CAO packing instructions (IATA)	:	870
CAO max net quantity (IATA)	:	No limit
Special provisions (IATA)	:	A51, A164, A183, A802
ERG code (IATA)	:	8L

### Inland waterway transport

Special provisions (ADN)	:	295, 598
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E0
Equipment required (ADN)	:	PP, EP
Number of blue cones/lights (ADN)	:	0

### Rail transport

Classification code (RID)	:	C11
Special provisions (RID)	:	295, 598
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P801, P801a
Transport category (RID)	:	3
Special provisions for carriage – Bulk (RID)	:	VW14
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	80

## 14.7. Transport in bulk according to Annex II of Marpol 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

##### REACH Annex XVII (Restriction List)

Not applicable.

##### REACH Annex XIV (Authorisation List)

Not applicable.

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

### REACH Candidate List (SVHC)

Contains one substance (s) from the list of candidate substances of REACH: Lead (EC 231-100-4, CAS 7439-92-1)

### PIC Regulation (Prior Informed Consent)

Substances subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals: lead dioxide (1309-60-0), lead sulphate (7446-14-2)

### POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

### ANNEX I RESTRICTED EXPLOSIVES PRECURSORS

List of substances which shall not be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Sulphuric acid	7664-93-9	15 % w/w	40 % w/w	ex 2807 00 00	ex 3824 99 96

Please see [https://ec.europa.eu/home-affairs/system/files/2021-11/list\\_of\\_competentAuthorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competentAuthorities_and_national_contact_points_en.pdf)

### Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Sulphuric acid		7664-93-9	2807 00 10	Category 3		Annex I

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
14.6	Transport information	Modified	

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS-No.	Chemical Abstract Service number
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC No.	European Community number
EC50	Median effective concentration
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
IOELV	Indicative Occupational Exposure Limit Value
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
WGK	Water Hazard Class
vPvB	Very Persistent and Very Bioaccumulative

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: Classification procedure according to Regulation (EC) No. 1272/2008 [CLP]: Physical hazards: On basis of test data. Health hazards: Calculation method. Environmental hazards: Calculation method.

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Lact.	Reproductive toxicity, Additional category, Effects on or via lactation
Repr. 1A	Reproductive toxicity, Category 1A
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

Safety Data Sheet (SDS), EU

# LEAD ACID BATTERY, WET, FILLED WITH ACID

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH), as retained and amended in UK law

To ensure the safe use of all batteries supplied by GS YUASA, the following precautions must be observed:

- Warning: Risk of fire, explosion, or burns. Do not disassemble, heat above 50°C, or incinerate.
- Never short-circuit battery terminals since sparks and arcs produced can injure personnel and are a fire and explosion hazard.
- Batteries must always be charged on a voltage-regulated charging system with adequate ventilation provided to avoid the build-up of ignitable gases and to promote good heat dissipation.
- Do not charge Batteries above + 50 °C, discharge or store above + 60 °C.
- Under extreme conditions of charging equipment malfunction and/or battery failure, high voltage and high temperature conditions may occur causing the evolution of Hydrogen Sulphide (H<sub>2</sub>S) gas, which is toxic. If detected by its odour of rotten eggs (at extremely low concentrations), switch off the charging equipment, evacuate all personnel from the area and ventilate well. Seek advice before attempting to re-start charging
- NEVER PLACE BATTERIES INSIDE SEALED OR GAS-TIGHT ENCLOSURES DURING OPERATION, TRANSPORT AND STORAGE

Batteries emit hydrogen gas which is highly flammable and will form explosive mixtures in air from approximately 4% to 76%. This can be ignited by a spark at any voltage, naked flames, or other sources of ignition

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.