



# 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  
Date of issue: 8/15/2022 Revision date: 11/22/2022 Supersedes: 8/15/2022 Version: 1.1

### 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 Series Batteries  |
| 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<br>GS Yuasa Battery Sales UK Ltd.<br>Telephone: (+44) 01793-833-560<br>E-mail: matthew.elwick@gs-yuasa.uk<br>Language: English language only<br>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

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### 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)

: 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.

Precautionary statements (CLP)

: 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.

## 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  $\geq 0.1\%$  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)<br>substance listed as REACH Candidate (Lead)<br>substance with a Community workplace exposure limit | CAS-No.: 7439-92-1<br>EC No.: 231-100-4<br>EC index No.: 082-013-00-1                               | 44 – 90 | Repr. 1A, H360FD<br>Lact., H362<br>STOT RE 1, H372<br>Aquatic Acute 1, H400 (M=1)<br>Aquatic Chronic 1, H410 (M=10) |
| sulphuric acid ... %                                                                                           | CAS-No.: 7664-93-9<br>EC No.: 231-639-5<br>EC index No.: 016-020-00-8<br>REACH-no: 01-2119458838-20 | 21 – 47 | Skin Corr. 1A, H314                                                                                                 |

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

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

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### 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. |
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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<br>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 SnH <sub>4</sub> , (as Sn <sub>4</sub> )<br>0.1 mg/m <sup>3</sup> compounds, organic, except Cyhexatin (ISO), (as Sn) |

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|                                                           |                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tin (7440-31-5)</b>                                    |                                                                                                                                                                                                                                                                                             |
| WEL STEL (mg/m³)                                          | 4 mg/m³ compounds, inorganic, except SnH <sub>4</sub> , (as Sn)<br>0.2 mg/m³ compounds, organic, except Cyhexatin (ISO), (as Sn)                                                                                                                                                            |
| <b>Lead (Pb) (7439-92-1)</b>                              |                                                                                                                                                                                                                                                                                             |
| <b>EU - Binding Occupational Exposure Limit (BOEL)</b>    |                                                                                                                                                                                                                                                                                             |
| Local name                                                | Inorganic lead and its compounds                                                                                                                                                                                                                                                            |
| BOEL TWA                                                  | 0.15 mg/m³                                                                                                                                                                                                                                                                                  |
| Regulatory reference                                      | DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)                                                                                                                                                                                                                                     |
| <b>EU - Biological Limit Value (BLV)</b>                  |                                                                                                                                                                                                                                                                                             |
| Local name                                                | Lead and its inorganic compounds                                                                                                                                                                                                                                                            |
| BLV                                                       | 30 µg/100ml Parameter: Pb                                                                                                                                                                                                                                                                   |
| Regulatory reference                                      | SCOEL List of recommended health-based BLVs and BGVs                                                                                                                                                                                                                                        |
| <b>Ireland - Occupational Exposure Limits</b>             |                                                                                                                                                                                                                                                                                             |
| Local name                                                | Lead and its compounds (except tetraethyl lead)                                                                                                                                                                                                                                             |
| OEL (8 hours ref) (mg/m³)                                 | 0.15 mg/m³                                                                                                                                                                                                                                                                                  |
| Remark                                                    | Repr.1A (Substances which are known human reproductive toxicants), BOELV (Binding Occupational Exposure Limit Values)                                                                                                                                                                       |
| Regulatory reference                                      | Chemical Agents Code of Practice 2021                                                                                                                                                                                                                                                       |
| <b>Ireland - Biological limit values</b>                  |                                                                                                                                                                                                                                                                                             |
| 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                                                                                                                                                                                                  |
| <b>sulphuric acid ... % (7664-93-9)</b>                   |                                                                                                                                                                                                                                                                                             |
| <b>EU - Indicative Occupational Exposure Limit (IOEL)</b> |                                                                                                                                                                                                                                                                                             |
| Local name                                                | Sulphuric acid (mist)                                                                                                                                                                                                                                                                       |
| Regulatory reference                                      | COMMISSION DIRECTIVE 2009/161/EU                                                                                                                                                                                                                                                            |
| <b>Ireland - Occupational Exposure Limits</b>             |                                                                                                                                                                                                                                                                                             |
| Local name                                                | Sulphuric acid                                                                                                                                                                                                                                                                              |
| OEL (8 hours ref) (mg/m³)                                 | 0.05 mg/m³                                                                                                                                                                                                                                                                                  |
| Remark                                                    | IOELV (Indicative Occupational Exposure Limit Values)                                                                                                                                                                                                                                       |
| Regulatory reference                                      | Chemical Agents Code of Practice 2021                                                                                                                                                                                                                                                       |
| <b>United Kingdom - Occupational Exposure Limits</b>      |                                                                                                                                                                                                                                                                                             |
| Local name                                                | Sulphuric acid                                                                                                                                                                                                                                                                              |
| WEL TWA (mg/m³)                                           | 0.05 mg/m³ mist                                                                                                                                                                                                                                                                             |
| Remark (WEL)                                              | The mist is defined as the thoracic fraction                                                                                                                                                                                                                                                |
| Regulatory reference                                      | EH40/2005 (Fourth edition, 2020). HSE                                                                                                                                                                                                                                                       |

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| 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/m <sup>3</sup> )                  | 0.1 mg/m <sup>3</sup> 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.

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### 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/m <sup>3</sup> (Lead)              |
| Solubility                                 | : Soluble in water.<br>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.

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### 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.

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|                                         |                                                       |
|-----------------------------------------|-------------------------------------------------------|
| <b>Antimony (Sb) (7440-36-0)</b>        |                                                       |
| 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)             |
| <b>Tin (7440-31-5)</b>                  |                                                       |
| LC50 fish                               | > 12.4 µg/l 96 Hours (Salmo gairdneri)                |
| <b>Lead (Pb) (7439-92-1)</b>            |                                                       |
| 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)               |
| <b>Lead dioxide (1309-60-0)</b>         |                                                       |
| EC50 Daphnia                            | 2100 µg/l 96 Hours (Daphnia magna)                    |
| <b>sulphuric acid ... % (7664-93-9)</b> |                                                       |
| 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

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| <b>Antimony (Sb) (7440-36-0)</b>        |                                        |
| Persistence and degradability           | Not relevant for inorganic substances. |
| <b>Tin (7440-31-5)</b>                  |                                        |
| Persistence and degradability           | Not relevant for inorganic substances. |
| <b>Lead (Pb) (7439-92-1)</b>            |                                        |
| Persistence and degradability           | Not relevant for inorganic substances. |
| <b>sulphuric acid ... % (7664-93-9)</b> |                                        |
| Persistence and degradability           | Not relevant for inorganic substances. |

### 12.3. Bioaccumulative potential

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| <b>Antimony (Sb) (7440-36-0)</b>        |                                        |
| Bioaccumulative potential               | Not relevant for inorganic substances. |
| <b>Lead (Pb) (7439-92-1)</b>            |                                        |
| Bioaccumulative potential               | Not relevant for inorganic substances. |
| <b>sulphuric acid ... % (7664-93-9)</b> |                                        |
| Bioaccumulative potential               | Not relevant for inorganic substances. |

### 12.4. Mobility in soil

No additional information available

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### 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<br>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 |

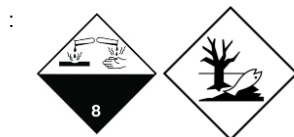
### 14.2. UN proper shipping name

|                                       |                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------|
| 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 |



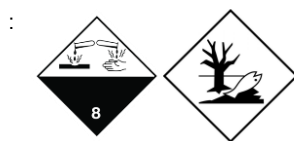
#### IMDG

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 8 |
| Danger labels (IMDG)              | : 8 |

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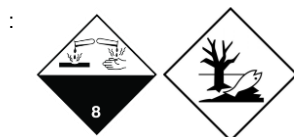
### IATA

Transport hazard class(es) (IATA)

: 8

Danger labels (IATA)

: 8



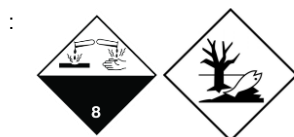
### ADN

Transport hazard class(es) (ADN)

: 8

Danger labels (ADN)

: 8



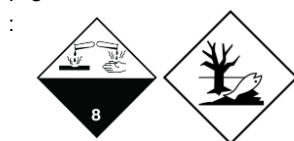
### RID

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)

: 1I

Excepted quantities (ADR)

: E0

Packing instructions (ADR)

: P801, P801a

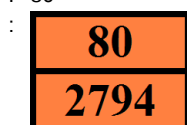
Transport category (ADR)

: 3

Hazard identification number (Kemler No.)

: 80

Orange plates



Tunnel restriction code (ADR)

: E

EAC code

: 2R

# LEAD ACID BATTERY, WET, FILLED WITH ACID

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### 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.<br>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.<br>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.

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### 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\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_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

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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

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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.