

VRLA Lead acid motorcycle battery

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 4/19/2021 Revision date: 1/1/2025 Version: 3.0

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

1.1. Product identifier

Product form : Article
Trade name : 75575 / EBU1-4 ,75576 / EBU1R-4 ,45540 / EB20H-3

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

1.2.1. Relevant identified uses

Main use category : Motorcycle starting, ignition, lighting

1.2.2. Uses advised against

Restrictions on use : No information available

1.3. Details of the supplier of the safety data sheet

Supplier

Leoch Battery (Jiangsu)Corp.
North of Shenhua Blvd. (West of Tongtai Road), Jinhu IndustryZone, Jinhu, Huaian,
Jiangsu, China
T 086-755-8603-6060 - F 086-755-2606-7269
Export@leoch.com - www.leoch.com

1.4. Emergency telephone number

Emergency number : 1-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The article is non-hazardous chemical, but when it is broken or leaked, the leakage contains following hazards:

Skin corrosion/irritation, Category 1, Sub-Category 1A H314
Reproductive toxicity, Category 1A H360
Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS08

Signal word (CLP) : Danger
Contains : Lead; Sulfuric acid
Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.
H360 - May damage fertility or the unborn child.

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Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

Lead (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
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Not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This product is an article which contains following substances:

Specific concentration limits

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lead substance listed as REACH Candidate	CAS-No.: 7439-92-1 EC-No.: 215-267-0;231-100-4 EC Index-No.: 082-014-00-7	65 – 75	Repr. 1A, H360FD Lact., H362
Sulfuric acid	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8	18 – 20	Skin Corr. 1A, H314
Polypropylene (PP) or Acrylonitrile Butadiene Styrene (ABS)	CAS-No.: 9003-07-0; 9003-56-9 EC-No.: 618-352-4; 618-371-8	10	Not classified
Glass, oxide, chemicals	CAS-No.: 65997-17-3 EC-No.: 266-046-0	2	Not classified
Tin	CAS-No.: 7440-31-5 EC-No.: 231-141-8	< 0.2	Not classified
Calcium	CAS-No.: 7440-70-2 EC-No.: 231-179-5 EC Index-No.: 020-001-00-X	0.03 – 0.05	Water-react. 2, H261
Aluminum	CAS-No.: 7429-90-5 EC-No.: 231-072-3 EC Index-No.: 013-002-00-1	≤ 0.01	Flam. Sol. 1, H228 Water-react. 2, H261

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Name	Product identifier	Specific concentration limits
Sulfuric acid	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8	(5 ≤C < 15) Skin Irrit. 2, H315 (5 ≤C < 15) Eye Irrit. 2, H319 (15 ≤C < 100) Skin Corr. 1A, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If necessary seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Get medical advice if necessary.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: No information available.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Precautionary measures fire	: Stop leak if safe to do so. Evacuate unnecessary personnel. Keep upwind. Remove all sources of ignition.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Ensure adequate ventilation. Keep upwind. Wear personal protective equipment.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear proper protective equipment.
Emergency procedures	: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Stop leak if safe to do so. Remove all sources of ignition. Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Stop leak without risks if possible.
- Methods for cleaning up : Mechanically recover the product.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Lead (7439-92-1)	
EU - Biological Limit Value (BLV)	
BLV	70 µg/100ml Parameter: Lead - Medium: blood - Sampling time: no restriction (binding biological limit value) 0.075 mg/m ³ Parameter: Lead - Medium: air - Sampling time: 40 hours per week (TWA medical surveillance threshold in air measured as a time weighted average over 40 hours per week) 40 µg/100ml Parameter: Lead - Medium: blood - Sampling time: no restriction (medical surveillance threshold measured in individual workers)
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	0.1 mg/m ³ (inhalable fraction)
MAK (OEL STEL)	0.4 mg/m ³ (inhalable fraction)
Bulgaria - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³
Bulgaria - Biological limit values	
BLV	300 µg/l Parameter: Lead - Medium: blood - Sampling time: not fixed (for women under 45 years old) 400 µg/l Parameter: Lead - Medium: blood - Sampling time: not fixed
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	0.15 mg/m ³
Chemical category	Reproductive Toxin category 1

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Lead (7439-92-1)	
Croatia - Biological limit values	
BLV	Parameter: Lead - Medium: blood - Sampling time: not critical (medical surveillance should be carried out when the limit value of Lead in blood of workers exceeds 40 µg/100 mL of blood) 80 µg/g creatinine Parameter: Lead - Medium: urine - Sampling time: single sample or urine collected over 24 hours (for all results that are expressed as Creatinine, Creatinine concentration less than 0.5 g/L and greater than 3.0 g/L should not be considered) Parameter: .delta.-Aminolevulinic acid dehydratase - Medium: blood - Sampling time: not critical Parameter: Protoporphyrin in erythrocytes - Medium: blood - Sampling time: after exposure during 2-3 months (sample protected from light) (interference of Iron deficiency (Anemia sideropenic))
Cyprus - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	0.05 mg/m ³
Czech Republic - Biological limit values	
BLV	13 µmol/mmol Creatinine Parameter: 5-Aminolevulinic acid - Medium: urine - Sampling time: discretionary (for short term continual exposures <=30 calendar days) 0.035 µmol/mmol Creatinine Parameter: Coproporphyrin - Medium: urine - Sampling time: discretionary (for short term continual exposures <=30 calendar days) 15 mg/g creatinine Parameter: 5-Aminolevulinic acid - Medium: urine - Sampling time: discretionary (for short term continual exposures <=30 calendar days) 0.2 mg/g creatinine Parameter: Coproporphyrin - Medium: urine - Sampling time: discretionary (for short term continual exposures <=30 calendar days) 0.4 mg/l Parameter: Lead - Medium: blood - Sampling time: discretionary
Denmark - Occupational Exposure Limits	
OEL TWA [1]	0.05 mg/m ³ (dust, fume and powder)
Denmark - Biological limit values	
BLV	20 µg/100ml Parameter: Lead - Medium: blood
Estonia - Occupational Exposure Limits	
OEL TWA	0.1 mg/m ³ (total dust) 0.05 mg/m ³ (respirable dust)
Chemical category	Reproductive toxin
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	0.1 mg/m ³ (all works)
Finland - Biological limit values	
BLV	1.4 µmol/l Parameter: Lead - Medium: blood - Sampling time: time of day does not matter
France - Occupational Exposure Limits	
VME (OEL TWA)	0.1 mg/m ³ (restrictive limit)
France - Biological limit values	
BLV	400 µg/l Parameter: Lead - Medium: blood (biological limit value, men) 180 µg/l Parameter: Lead - Medium: blood - Sampling time: indifferent sampling time 300 µg/l Parameter: Lead - Medium: blood (biological limit value, women) 200 µg/l Parameter: Lead - Medium: blood (medical surveillance value, men) 100 µg/l Parameter: Lead - Medium: blood (medical surveillance value, women)

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Lead (7439-92-1)	
Germany - Biological limit values (TRGS 903)	
BLV	300 µg/l Parameter: Lead - Medium: whole blood - Sampling time: no restriction (women age below 45 years) 400 µg/l Parameter: Lead - Medium: whole blood - Sampling time: no restriction
Gibraltar - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³
Gibraltar - Biological limit values	
BLV	70 µg/100ml Parameter: Lead - Medium: blood (binding biological limit value) 0.075 mg/m ³ Parameter: Lead - Medium: air - Sampling time: 40 hours per week (medical surveillance must be carried out) 40 µg/100ml Parameter: Lead - Medium: blood (medical surveillance must be carried out)
Greece - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	0.15 mg/m ³
Chemical category	Repr1A
Ireland - Occupational Exposure Limits	
OEL TWA [1]	0.15 mg/m ³
OEL STEL	0.45 mg/m ³ (calculated)
Italy - Occupational Exposure Limits	
OEL TWA	0.075 mg/m ³
Latvia - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³
Latvia - Biological limit values	
BEI	40 µg/100ml Parameter: Lead - Medium: blood (reference value for Lead concentration in blood for occupationally unexposed population <=10 µg/100 mL) 100 µg/g creatinine Parameter: Coproporphyrin - Medium: urine (reference value 22-57 µg/g Creatinine) 5 mg/g creatinine Parameter: Aminolevulinic acid - Medium: urine (reference value 0.5-2.5 mg/g Creatinine)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	0.15 mg/m ³ (inhalable fraction) 0.07 mg/m ³ (respirable fraction)
Luxembourg - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³
Netherlands - Occupational Exposure Limits	
MAC-TGG (OEL TWA)	0.15 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	0.05 mg/m ³ (inhalable fraction)
Portugal - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³ (mandatory indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³

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Lead (7439-92-1)	
Romania - Biological limit values	
BLV	150 µg/l Parameter: Lead - Medium: urine - Sampling time: end of shift 70 µg/100ml Parameter: Lead - Medium: blood - Sampling time: end of shift (Directive 98/24/CE) Parameter: Lead - Medium: hair - Sampling time: end of shift 10 mg/l Parameter: .delta.-Aminolevulinic acid - Medium: urine - Sampling time: end of shift 300 µg/l Parameter: Coproporphyrin - Medium: urine - Sampling time: end of shift Parameter: Erythrocytes protoporphyrin - Medium: blood - Sampling time: end of shift
Serbia - Biological limit values	
BLV	Parameter: Lead - Medium: blood - Sampling time: no restriction (binding biological limit value) Parameter: Lead - Medium: blood - Sampling time: no restriction (binding biological limit value for employed women in the generative period, less than 45 years) > 0.075 mg/m ³ Parameter: Lead - Medium: air - Sampling time: 40 hours per week (medical surveillance threshold in air calculated at a time average of 40 hours per week) Parameter: Lead - Medium: blood - Sampling time: no restriction (medical surveillance threshold measured in any employee) Parameter: Lead - Medium: blood - Sampling time: no restriction (medical surveillance threshold measured in employed women in the generative period, less than 45 years)
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	0.15 mg/m ³ (inhalable fraction) 0.5 mg/m ³ (respirable fraction)
Slovakia - Biological limit values	
BLV	400 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical 100 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical (women younger than 45 years of age) 15 mg/l Parameter: .delta.-Aminolevulinic acid - Medium: urine - Sampling time: not critical 6 mg/l Parameter: .delta.-Aminolevulinic acid - Medium: urine - Sampling time: not critical (women younger than 45 years of age) 0.3 mg/l Parameter: Coproporphyrins - Medium: urine - Sampling time: not critical
Slovenia - Occupational Exposure Limits	
OEL TWA	0.1 mg/m ³ (inhalable fraction)
OEL STEL	0.4 mg/m ³ (inhalable fraction)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	0.15 mg/m ³
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	0.1 mg/m ³ (inhalable dust) 0.05 mg/m ³ (respirable dust)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	0.15 mg/m ³
WEL STEL (OEL STEL)	0.45 mg/m ³ (calculated)
Norway - Occupational Exposure Limits	
Grønseverdi (OEL TWA) [1]	0.05 mg/m ³ (dust and fume)
Korttidsverdi (OEL STEL)	0.15 mg/m ³ (value calculated-dust and fume)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	0.1 mg/m ³ (inhalable dust)

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Lead (7439-92-1)	
KZGW (OEL STEL)	0.8 mg/m ³ (inhalable dust)
Switzerland - Biological limit values	
BAT	400 µg/l Parameter: Lead - Medium: whole blood - Sampling time: no restrictions (men and women over 45 years old) 100 µg/l Parameter: Lead - Medium: whole blood - Sampling time: no restrictions (women less than 45 years old)
Turkey - Occupational Exposure Limits	
OEL TWA	0.15 mg/m ³
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.05 mg/m ³
USA - ACGIH - Biological Exposure Indices	
BEI	200 µg/l
Sulfuric acid (7664-93-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	0.05 mg/m ³ (taking into account potential limitations and interferences which take place in the presence of other Sulphur compounds-mist)
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	0.1 mg/m ³ (corresponds to 0.05 mg/m ³ Thoracic-inhalable fraction)
MAK (OEL STEL)	0.2 mg/m ³ (inhalable fraction)
Belgium - Occupational Exposure Limits	
OEL TWA	0.2 mg/m ³
Bulgaria - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (when choosing a suitable method for monitoring exposure should take into account potential constraints and interactions that may occur in the presence of other sulfur compounds-respirable aerosol)
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	0.05 mg/m ³
Cyprus - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (vapor)
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	1 mg/m ³ 0.05 mg/m ³ (concentrated-mist)
Denmark - Occupational Exposure Limits	
OEL TWA [1]	0.05 mg/m ³ (thoracic fraction-mist)
Estonia - Occupational Exposure Limits	
OEL TWA	1 mg/m ³ (particles that reach the upper respiratory tract)
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	0.05 mg/m ³ (thoracic fraction)
HTP (OEL STEL)	0.1 mg/m ³ (thoracic fraction)
France - Occupational Exposure Limits	
VME (OEL TWA)	0.05 mg/m ³ (thoracic fraction)

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Sulfuric acid (7664-93-9)	
VLE (OEL C/STEL)	3 mg/m ³
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	0.1 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction)
Gibraltar - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (when selecting an appropriate exposure monitoring method, account should be taken of potential limitations and interferences that may arise in the presence of other sulphur compounds-thoracic fraction)
Greece - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (mist)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	0.05 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA [2]	0.05 ppm
OEL STEL [ppm]	0.15 ppm (calculated)
Italy - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (When choosing a suitable method for monitoring exposure should take into account potential constraints and interactions that may occur in the presence of other sulfur compounds, respirable fraction-thoracic fraction, mist)
Latvia - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (by choosing an appropriate exposure monitoring method there should be taken into account possible restrictions and the impact which could be caused by the presence of other Sulfur components-fog, which is defined as the thoracic fraction)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	0.05 mg/m ³ (vapor)
TPRV (OEL STEL)	3 mg/m ³ (fog-vapor)
Luxembourg - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³
Malta - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (mist)
Netherlands - Occupational Exposure Limits	
MAC-TGG (OEL TWA)	0.05 mg/m ³ (defined as thoracic fraction-mist)
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	0.05 mg/m ³ (thoracic fraction)
Portugal - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (thoracic fraction-mist)
Chemical category	A2 - Suspected Human Carcinogen present in strong inorganic acid mixtures
Romania - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (when selecting an appropriate exposure monitoring method there should be taken in account the potential limitations and interferences that may arise because of other Sulfur compounds presence)

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Sulfuric acid (7664-93-9)	
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	0.05 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (inhalable fraction, fog)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	0.05 mg/m ³ (indicative limit value-mist)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	0.1 mg/m ³ (inhalable fraction)
KTV (OEL STEL)	0.2 mg/m ³ (inhalable fraction)
Chemical category	Carcinogen aerosols
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	0.05 mg/m ³ (mist)
WEL STEL (OEL STEL)	0.15 mg/m ³ (calculated-mist)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	0.1 mg/m ³ (thoracic fraction)
Korttidsverdi (OEL STEL)	0.3 mg/m ³ (value calculated-thoracic fraction)
Chemical category	Carcinogen aerosol
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	0.1 mg/m ³ (inhalable dust)
KZGW (OEL STEL)	0.2 mg/m ³ (inhalable dust)
Chemical category	Category C1A carcinogen
Turkey - Occupational Exposure Limits	
OEL TWA	0.05 mg/m ³ (steam)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
ACGIH chemical category	Suspected Human Carcinogen contained in strong inorganic acid mists
Polypropylene (9003-07-0)	
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	5 mg/m ³ (dust)
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³ (dust)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	10 mg/m ³ (not stabilized)
Glass, oxide, chemicals (65997-17-3)	
Belgium - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (dust and fiber)

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Tin (7440-31-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tin (inorganic compounds as Sn)
IOEL TWA	2 mg/m ³
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	2 mg/m ³ (inhalable fraction)
MAK (OEL STEL)	4 mg/m ³ (inhalable fraction)
Belgium - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Chemical category	Skin
Bulgaria - Occupational Exposure Limits	
OEL TWA	0.1 mg/m ³ 2 mg/m ³
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	2 mg/m ³
Cyprus - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	2 mg/m ³
Greece - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA [1]	2 mg/m ³
OEL STEL	6 mg/m ³ (calculated)
Malta - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	2 mg/m ³ (inhalable fraction)
Portugal - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Slovakia - Occupational Exposure Limits	
Chemical category	Potential for cutaneous absorption
Slovenia - Occupational Exposure Limits	
OEL TWA	0.1 mg/m ³ (applies to organic compounds-inhalable fraction) 2 mg/m ³ (applies to inorganic compounds)
Chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	2 mg/m ³

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Tin (7440-31-5)	
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	2 mg/m ³ (inhalable dust)
Switzerland - Occupational Exposure Limits	
Chemical category	Skin notation
Turkey - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	2 mg/m ³
Aluminum (7429-90-5)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	10 mg/m ³ (inhalable fraction)
MAK (OEL STEL)	20 mg/m ³ (inhalable fraction)
Belgium - Occupational Exposure Limits	
OEL TWA	1 mg/m ³
Bulgaria - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (metal dust) 1.5 mg/m ³ (respirable fraction)
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)
Croatia - Biological limit values	
BLV	200 mg/l Parameter: Aluminum - Medium: urine - Sampling time: at the end of the work shift
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	10 mg/m ³ (dust)
Denmark - Occupational Exposure Limits	
OEL TWA [1]	5 mg/m ³ (dust, fume and powder, total) 2 mg/m ³ (dust and powder, respirable)
Estonia - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)
France - Occupational Exposure Limits	
VME (OEL TWA)	10 mg/m ³ (metal) 5 mg/m ³ (dust)
Greece - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (inhalable fraction) 5 mg/m ³ (respirable fraction)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	6 mg/m ³ (respirable dust)
Ireland - Occupational Exposure Limits	
OEL TWA [1]	1 mg/m ³ (respirable fraction)

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Aluminum (7429-90-5)	
OEL STEL	3 mg/m ³ (calculated-respirable dust)
Latvia - Occupational Exposure Limits	
OEL TWA	2 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³ (inhalable fraction) 2 mg/m ³ (respirable fraction) 1 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	2.5 mg/m ³ (non-stabilized-inhalable fraction) 1.2 mg/m ³ (non-stabilized-respirable fraction)
Portugal - Occupational Exposure Limits	
OEL TWA	10 mg/m ³ (metal dust)
Romania - Occupational Exposure Limits	
OEL TWA	3 mg/m ³ (dust) 1 mg/m ³ (fume)
OEL STEL	10 mg/m ³ (dust) 3 mg/m ³ (fume)
Romania - Biological limit values	
BLV	200 µg/l Parameter: Aluminum - Medium: urine - Sampling time: end of shift
Slovakia - Biological limit values	
BLV	60 µg/g creatinine Parameter: Aluminum - Medium: urine - Sampling time: not critical
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	10 mg/m ³ (dust)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	5 mg/m ³ (total dust) 2 mg/m ³ (respirable dust)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m ³ (inhalable dust) 4 mg/m ³ (respirable dust)
WEL STEL (OEL STEL)	30 mg/m ³ (calculated-inhalable dust) 12 mg/m ³ (calculated-respirable dust)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	5 mg/m ³ (pyrotechnical-powder)
Korttidsverdi (OEL STEL)	10 mg/m ³ (pyrotechnical-powder)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	3 mg/m ³ (respirable dust)
Switzerland - Biological limit values	
BAT	60 µg/g creatinine Parameter: Aluminum - Medium: urine - Sampling time: no restrictions
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	1 mg/m ³ (respirable particulate matter)
ACGIH chemical category	Not Classifiable as a Human Carcinogen

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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:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Black.
Odour	: None.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable

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Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong alkalis. Heat

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Sulfuric acid (7664-93-9)

LC50 Inhalation - Rat	85 – 103 mg/m ³ (Exposure time: 1 h)
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Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

Potential adverse human health effects and symptoms : No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Sulfuric acid (7664-93-9)

LC50 - Fish [1]	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Sulfuric acid (7664-93-9)

BCF - Fish [1]	(no bioaccumulation)
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

Lead (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
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12.6. Endocrine disrupting properties

Not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2800	UN 2800	UN 2800	UN 2800	UN 2800
14.2. UN proper shipping name				
BATTERIES, WET, NON-SPILLABLE	BATTERIES, WET, NON-SPILLABLE	BATTERIES, WET, NON-SPILLABLE	BATTERIES, WET, NON-SPILLABLE	BATTERIES, WET, NON-SPILLABLE
Transport document description				
UN 2800 BATTERIES, WET, NON-SPILLABLE, 8,	UN 2800 BATTERIES, WET, NON-SPILLABLE, 8,			
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C11
Special provisions (ADR)	: 238, 295, 598
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P003, P801a
Special packing provisions (ADR)	: PP16
Transport category (ADR)	: 3
Special provisions for carriage - Bulk (ADR)	: VC1, VC2, AP8
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
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EAC code : 2R

Transport by sea

Special provisions (IMDG) : 238
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P003
Special packing provisions (IMDG) : PP16
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Properties and observations (IMDG) : Metal plates immersed in gelled alkaline or acid electrolyte in a glass, hard rubber or plastics receptacle of a non-spillable type. When electrically charged, may cause fire through short-circuiting of terminals. Cause burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E0
PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : 872
PCA max net quantity (IATA) : No limit
CAO packing instructions (IATA) : 872
CAO max net quantity (IATA) : No limit
Special provisions (IATA) : A48, A67, A164, A183
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C11
Special provisions (ADN) : 238, 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) : 238, 295, 598
Limited quantities (RID) : 1L
Excepted quantities (RID) : E0
Packing instructions (RID) : P003, P801a
Special packing provisions (RID) : PP16
Transport category (RID) : 3
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP8
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 80

14.7. Maritime transport in bulk according to IMO instruments

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

Contains one substance (s) from the list of candidate substances of REACH in a concentration > 0,1%: Lead (EC 215-267-0;231-100-4, CAS 7439-92-1)
Contains no substance 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.
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

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15.1.2. National regulations

Not listed on the AICS (Australian Inventory of Chemical Substances)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory
Not subject to reporting requirements of the United States SARA Section 313
Not listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Not listed on KECL/KECI (Korean Existing Chemicals Inventory)

France	
Occupational diseases	
Code	Description
RG 1	Conditions caused by lead and its compounds
RG 66	Occupational rhinitis and asthma

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Sulfuric acid, Glass, oxide, chemicals are listed
SZW-lijst van mutagene stoffen : Glass, oxide, chemicals is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : Lead is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : Lead is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Lead is listed

Denmark

Danish National Regulations : During use and disposal, the relevant Danish regulations must be observed

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials
Chemicals Ordinance (SR 813.11) : Group 1

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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Data sources : LOLI. ECHA reference.

Full text of H- and EUH-statements	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Sol. 1	Flammable solids, Category 1
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
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.

Safety Data Sheet (SDS), EU

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