Safety Data Sheet

Battery Electrolyte (Sulfuric Acid)

According to Regulation (EU) No 2020/878
Regulation (EC) No 1272/2008

Version 4.0

Issue date: 02/12/2019
Revision date : 18/04/2023

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product Form :	Mixture
Product name :	Battery Fluid, Sulphuric Acid
UFI Code :	W200-N0TJ-400F-T19P
Product Code :	Battery Acid pack (Sulfuric Acid)
Other means of identification :	Battery fluid, Sulphuric Acid, Electrolyte, Battery Acid

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:	Electrolyte for lead-acid Motorcycle batteries.
1.2.2 Uses advised against:	Anything other than the above

1.3 Details of the supplier of the safety data sheet:

Supplier:	**FULBAT S.a.s**
Address:	30 Rue Pasteur
	92150 Suresnes
	France
Telephone:	(France) +33 1 83 62 45 55

1.4 Emergency telephone Number:

CHEMTREC(US, Canada & Mexico)	0086-1-800-424-9300			
CHEMTREC (International)	0086-1-703-527-3887			
Available outside office hours?	YES		NO	X

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The mixture is classified according to regulation (EC) No 1272/2008 and according to Regulation (EU) 2020/878 (REACH Annex II)

Skin Corr. 1A	H314

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

2.2 label elements: Hazard Pictograms:

GHS05

Signal word (CLP)	Danger
Contains	Sulphuric Acid
Hazard statements (CLP)	H314 - Causes severe skin burns and eye damage
Precautionary statements (CLP)	P102 - Keep out of reach of children
	P405 - Store locked up
	P501 - Dispose of contents/container to authorized companies for recycling or disposal of waste
	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 [or shower].
	P260 - Do not breathe dust/fume/gas/mist/vapours/spray
	P264 - Wash ... thoroughly after handling
	P280 - Wear protective gloves/protective clothing/eye protection/face protection

2.3 Other hazards:

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

Section 3 Composition/information on ingredients

Substance/Mixture: Mixture

Ingredient(s):

Name	Product identifier	Concentration %	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	56-63	Not classified
Sulfuric acid	(CAS No) 7664-93-9 (EC no) 231-639-5 (EC index no) 016-020-00-8 (REACH-no)	37-44	Skin Corr. 1A, H314

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 (REACH-no) : 01-2119458838-20-0181	(5 =< C < 15) Eye Irrit. 2, H319 (5 =< C < 15) Skin Irrit. 2, H315 (C >= 15) Skin Corr. 1A, H314

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

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Sulfuric Acid: Remove to fresh air immediately. If breathing is difficult, give oxygen. Lead Compounds: Remove from exposure, gargle, wash nose and lips, consult physician.

4.1.2 In case of skin contact:

Sulfuric Acid: Flush with large amounts of water for at least 15 minutes, remove any contaminated clothing. If irritation develops seek medical attention. Lead Compounds: Wash with soap and water.

4.1.3 In case of eyes contact:

Sulfuric Acid: Flush immediately with water for 15 minutes, consult a physician. Lead Compounds: Flush immediately with water for 15 minutes, consult a physician.

4.1.4 In case of ingestion:

Sulfuric Acid: Do not induce vomiting, consult a physician immediately. Lead Compounds: Consult a physician immediately.

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

Causes severe skin burns and eye damage. May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

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

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

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

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

Aspiration of this material may cause chemical pneumonia.

Section 5 Fire-Fighting 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 : Sulfuric acid will not burn but can start fires with organic material, nitrates, carbides, chlorates, and metal powders.

Explosion hazard : Reacts violently with water. It can react explosively with organic materials. Reacts with most metals to produce hydrogen gas, which can form an explosive mixture with air. Hydrogen may accumulate in containers, avoid ignition sources. Addition of water to acid causes heat and potentially explosive mixtures. Spill over into sewers may generate hydrogen gas or sulfides.

Hazardous decomposition products in case of fire : Toxic gases and fumes may be released in a fire.

5.3 Advice for firefighters: Wear positive pressure self-contained breathing apparatus. Wear fully protective suit.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

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

6.1.1 For non-emergency personnel: Use proper personal protective equipment as indicated in Section 8. Ensure adequate ventilation. Avoid contact with eyes. Wear protective equipment. Keep unprotected persons away.

6.1.2 For emergency responders: Wear positive pressure self-contained breathing apparatus if dust is generated. Evacuate unnecessary personnel

6.2 Environmental Precautions: Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

6.3 Methods for Containment and Cleaning up: In case the release occurs, stop flow of material: contain/absorb small spills with dry sand, earth, and vermiculite. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer. Spent Batteries - send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable.

6.4 Reference to other sections: See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Ensure good ventilation/exhaustion at the workplace. Avoid contact with eyes. Keep ignition sources away - Do not smoke. Due to the battery's low internal resistance and high power density, high levels of short circuit current can be developed across the battery terminals. Do not rest tools or cables on the battery. Use insulated tools only. Follow all installation instructions and diagrams when installing or maintaining battery systems.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas

7.2 Conditions for safe storage, including any incompatibilities:

Technical measures	Provide local exhaust or general room ventilation.
Storage conditions	Store in a dry, cool and well-ventilated place. Keep away from heat and direct sunlight. Incompatible products alkaline substances.
Special rules on packaging	Store in original container or corrosive resistant and/or lined container.

7.3 Specific end use(s):

No additional information available

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Sulfuric acid (7664-93-9)		
EU	IOELV TWA (mg/m³)	0,05 mg/m³ (taking into account potential limitations and interferences which take place in the presence of other Sulphur compounds-mist)
Austria	MAK (mg/m³)	0,1 mg/m³ (corresponds to 0.05 mg/m3 Thoracic- inhalable fraction)
Austria	MAK Short time value (mg/m³)	0,2 mg/m³ (inhalable fraction)
Belgium	Limit value (mg/m³)	0,2 mg/m³
Bulgaria	OEL TWA (mg/m³)	0,05 mg/m³ (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	GVI (granična vrijednost izloženosti) (mg/m³)	0,05 mg/m³
Cyprus	OEL TWA (mg/m³)	0,05 mg/m³ (vapor)
Czech Republic	Expoziční limity (PEL) (mg/m³)	1 mg/m³ 0,05 mg/m³ (concentrated-mist)
Denmark	Grænseværdie (langvarig) (mg/m³)	0,05 mg/m³ (thoracic fraction-mist)
Estonia	OEL TWA (mg/m³)	1 mg/m³ (fume)
Finland	HTP-arvo (8h) (mg/m³)	0,05 mg/m³
Finland	HTP-arvo (15 min)	0,1 mg/m³
France	VME (mg/m³)	0,05 mg/m³ (thoracic fraction)
France	VLE (mg/m³)	3 mg/m³

Germany	TRGS 900 Occupational exposure limit value (mg/m³)	0,1 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction)
Gibraltar	OEL TWA (mg/m³)	0,05 mg/m³ (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	OEL TWA (mg/m³)	0,05 mg/m³ (mist)
Hungary	AK-érték	0,05 mg/m³
Ireland	OEL (8 hours ref) (ppm)	0,05 ppm
Ireland	OEL (15 min ref) (ppm)	0,15 ppm (calculated)
Italy	OEL TWA (mg/m³)	0,05 mg/m³ (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	OEL TWA (mg/m³)	0.05 mg/m³ (possible limitations and the impact that may result from the presence of other Sulfur components should be taken into account when choosing an appropriate exposure monitoring method-fog, lvhich is defined as the thoracic fraction)
Lithuania	IPRV (mg/m³)	0,05 mg/m³ (vapor)
Lithuania	TPRV (mg/m³)	3 mg/m³ (fog-vapor)
Luxembourg	OEL TWA (mg/m³)	0,05 mg/m³
Malta	OEL TWA (mg/m³)	0,05 mg/m³ (mist)
Netherlands	Grenswaarde TGG 8H (mg/m³)	0,05 mg/m³ (defined as thoracic fraction-mist)
Poland	NDS (mg/m³)	0,05 mg/m³ (thoracic fraction)
Portugal	OEL TWA (mg/m³)	0,05 mg/m³ (thoracic fraction-mist)
Romania	OEL TWA (mg/m³)	0,05 mg/m³
Slovakia	NPHV (priemerná) (mg/m³)	0,1 mg/m³
Slovenia	OEL TWA (mg/m³)	0,05 mg/m³ (inhalable fraction, fog)
Spain	VLA-ED (mg/m³)	0,05 mg/m³ (indicative limit value; it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound; limitations and interferences can arise
Sweden	nivågränsvärde (NVG) (mg/m³)	0,1 mg/m³
Sweden	kortidsvärde (KTV) (mg/m³)	0,2 mg/m³
United Kingdom	WEL TWA (mg/m³)	0,05 mg/m³ (mist)
Norway	Gjennomsnittsverdier (AN) (mg/m³)	0,1 mg/m³ (inhalable fraction)
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m³)	0,3 mg/m³ (inhalable fraction)
Switzerland	VME (mg/m³)	0,1 mg/m³ (inhalable)
Switzerland	VLE (mg/m³)	0,1 mg/m³ (inhalable)
Australia	TWA (mg/m³)	1 mg/m³
Australia	STEL (mg/m³)	3 mg/m³
Canada (Quebec)	VECD (mg/m³)	3 mg/m³
Canada (Quebec)	VEMP (mg/m³)	1mg/m³
USA - ACGIH	ACGIH TWA (mg/m³)	0.2 mg/m³ (thoracic fraction)
USA - IDLH	US IDLH (mg/m³)	15 mg/m³
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	1 mg/m³
USA - OSHA	OSHA PEL (TWA) (mg/m³)	1mg/m³

8.2 Exposure controls:

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

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection:	Chemical goggles or face shield with safety glasses. EN 166
Hand protection:	Wear suitable gloves tested to EN374. Use neoprene gloves
Personal protective equipment:	Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection. Protective clothing.
Skin and body protection:	Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water.
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment. half-mask with filter according to EN 149.
Thermal hazards:	Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical state :	Liquid
Appearance:	Clear, Liquid
Colour:	Not available
Odour:	Not available
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	-33.67 °C(CAS#7664-93-9)
Freezing point	Not available
Boiling point/range (°C):	Not available
Flash point (°C):	Not available
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not available
Ignition temperature (°C):	Not available
Upper/lower explosive limits:	Not available
Vapour pressure (20°C):	0.485 hPa(CAS#7664-93-9)
Vapour density:	Not available
Relative Density:	1.84(20 °C,CAS#7664-93-9)
Bulk density (kg/m^3):	Not available
Water solubility (g/l):	1 000 g/L(20 °C,CAS#7664-93-9)
n-Octanol/Water (log Po/w):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	22.5mPaS(20 °C,CAS#7664-93-9)

Explosive properties:	Not available
Oxidising properties:	Not available

9.2. Other information:

Fat solubility(solvent-oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	pKa = 1.92(CAS#7664-93-9)
Oxidation-reduction Potential:	Not available

Section 10 Stability and reactivity

10.1 Reactivity:	Stable under normal conditions.
10.2 Chemical stability:	Stable at normal conditions.
10.3 Possibility of hazardous reactions:	Hazardous polymerization will not occur.
10.4 Conditions to avoid:	Mechanical impact. Heat sources.
10.5 Incompatible materials:	Alkali. metals. Combustible materials. Organic materials. Oxidising agents. amines. Bases. Chlorates. iron. Nitrates. Perchlorates. Permanganates. Phosphorus. Steel. zinc. Peroxides. cyanides. nitromethane. Benzene.
10.6 Hazardous decomposition products:	Carbon oxides. Sulphur oxides. Toxic and irritating gases are released following thermal decomposition or combustion.

Section 11 Toxicological information

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

Acute toxicity:

ATE_{mix}(oral):	Not available
ATE_{mix}(inhalation):	Not available
ATE_{mix}(Dermal):	Not available

Sulphuric acid (CAS: 7664-93-9)

LD50(Oral, Rat):	2140 mg/kg
LC50(Inhalation, Rat):	Not available
LD50(Dermal, Rabbit):	Not available
Skin corrosion/Irritation:	Causes severe skin burns and eye damage.
Serious eye damage/irritation:	Causes serious eye damage.
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

11.2 Information on other hazards

Endocrine disrupting properties	The mixture does not contain endocrine disruptor.
Other information	Not applicable

Section 12 Ecological information

12.1 Toxicity:

Sulphuric acid (CAS: 7664-93-9)

Acute (short-term) toxicity:	
LC50(96h, Fish):	> 16 - < 28 mg/L
EC50(48h, Crustacea):	> 100 mg/L
EC50(72h, Algae/aquatic plants):	> 100 mg/L
Chronic (long-term) toxicity:	
NOEC(Fish):	0.31 mg/L
NOEC(Crustacea):	0.15 mg/L
EC50(Algae/aquatic plants):	Not available
12.2 Persistence and degradability:	Not available.
12.3 Bioaccumulative potential:	Not available.
12.4 Mobility in soil:	Not available.
12.5 Results of PBT and vPvB assessment:	The mixture does not contain PBT / vPvB substance.
12.6 Endocrine disrupting properties:	The mixture does not contain endocrine disruptor.
12.7 Other adverse effects:	Not available.
12.8 Additional information	Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods:

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

Section 14 Transport information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (IATA)
14. 1 UN number or ID number	UN2796	UN2796	UN2796	UN2796
14.2 UN Proper shipping name	SULPHURIC ACID	SULPHURIC ACID	SULPHURIC ACID	SULPHURIC ACID
14.3 Transport hazard Class(es)	8	8	8	8
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No	No	No	No
14.6 Special precautions for user	See below	See below	See below	See below
14.7 Maritime transport in bulk according to IMO instruments	IBC02	IBC02	IBC02	IBC02

14.6 Special precautions for user

Overland transport

Classification code (ADR)	C1
Limited quantities (ADR)	1l
Excepted quantities (ADR)	E2
Packing instructions (ADR)	P001, IBC02
Mixed packing provisions (ADR)	MP15
Portable tank and bulk container instructions (ADR)	T8
Portable tank and bulk container special provisions (ADR)	TP2
Tank code (ADR)	L4BN
Vehicle for tank carriage	AT
Transport category (ADR)	2
Hazard identification number (Kemler No.)	80
Orange plates :	
Tunnel restriction code (ADR)	E
EAC code	2R

Transport by sea

Limited quantities (IMDG)	1 L
Excepted quantities (IMDG)	E2
Packing instructions (IMDG)	P001
IBC packing instructions (IMDG)	IBC02
IBC special provisions (IMDG)	B20
Tank instructions (IMDG)	T8
Tank special provisions (IMDG)	TP2
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	B
Properties and observations (IMDG)	Colourless liquid, mixture not exceeding 1.405 relative density. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.
MFAG-No	157

Air transport

PCA Excepted quantities (IATA)	E2
PCA Limited quantities (IATA)	Y840
PCA limited quantity max net quantity (IATA)	0.5L
PCA packing instructions (IATA)	851
PCA max net quantity (IATA)	1L
CAO packing instructions (IATA)	855
CAO max net quantity (IATA)	30L
ERG code (IATA)	8L

Inland waterway transport

Not subject to ADN	No

Rail transport

Carriage prohibited (RID)	No

Section 15 Regulation information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH substances with Annex XIV

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

CSA has not been established

Section 16 Other information

16.1 Indication of changes:

Version 4.0 Amended by (EU) 2020/878

16.2 Training instructions:

Not applicable.

16.3 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.4 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

FULL TEXT of H and EUH statement

Eye Dam. 1	**Serious eye damage/eye irritation, Category 1**
Eye Irrit. 2	**Serious eye damage/eye irritation, Category 2**
H314	**Causes severe skin burns and eye damage.**
H315	**Causes skin irritation.**
H318	**Causes serious eye damage.**
H319	**Causes serious eye irritation.**
Skin Corr. 1A	**Skin corrosion/irritation, Category 1, Sub-Category 1A**
Skin Irrit. 2	**Skin corrosion/irritation, Category 2**

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