

Lead-acid battery filled with diluted sulphuric acid



Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Revision date: 6/30/2021

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Version: 2.0

SDS No: 00377-0089

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

1.1. Product identifier

Product form : Article
Product name : Lead-acid battery filled with diluted sulphuric acid
Type of product : Note: This product is an "article" and is not an object that is required to issue Safety Data Sheets (SDS) by regulations concerning chemical substances. This SDS voluntarily offers helpful information for your safe handling and environmental care.

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 : batteries

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Robert Bosch GmbH
Automotive Aftermarket
P.O. Box 41 09 60
76227 Karlsruhe
Germany
T +49 721-942-0
E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.4. Emergency telephone number

Emergency number : INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation, Category 1, Sub-Category 1A	H314
Serious eye damage/eye irritation, Category 1	H318
Reproductive toxicity, Category 1A	H360FD
Specific target organ toxicity — Repeated exposure, Category 1	H372
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

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

Adverse physicochemical, human health and environmental effects

In use, may form flammable/explosive vapour-air mixture. Causes damage to organs through prolonged or repeated exposure. Harmful if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

As an article the product does not need to be labelled in accordance with EC-directives or respective national laws.
No labelling applicable

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2.3. Other hazards

Other hazards not contributing to the classification : In case of electrolyte leakage: According to concentration, aqueous solution causes irritations or burns of eyes, skin and mucous membranes. In case of cell damage, possible release of dangerous substances and a flammable gas mixture.

Component	
lead powder; [particle diameter < 1 mm] (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
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
Sulfuric acid (7664-93-9)	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
Component	
lead powder; [particle diameter < 1 mm](7439-92-1)	The substance is 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
Lead(7439-92-1)	The substance is 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
Sulfuric acid(7664-93-9)	The substance is 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

Comments : Concentration of the absorbed, diluted sulphuric acid varies in accordance to the state of charge.

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
lead powder; [particle diameter < 1 mm] substance listed as REACH Candidate (Lead)	CAS-No.: 7439-92-1 EC-No.: 231-100-4	~ 32	Repr. 1A, H360FD Lact., H362 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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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.: 231-100-4	~ 32	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Repr. 1A, H360Df STOT RE 1, H372 Aquatic Chronic 3, H412
Sulfuric acid	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8 REACH-no: 01-2119458838-20	~ 29	Skin Corr. 1A, H314
Plastic container	-	~ 7	Not classified

Specific concentration limits:

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	(5 ≤C < 15) Eye Irrit. 2, H319 (5 ≤C < 15) Skin Irrit. 2, H315 (15 ≤C < 100) Skin Corr. 1A, H314

Comments : Because of the cell structure the dangerous ingredients will not be available if used properly
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 : The following first aid measures are required only in case of exposure to interior battery components after damage of the external battery casing. Undamaged, closed cells do not represent a danger to the health.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Wash immediately with plenty water (during 20 minutes), also under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Give a slurry of activated charcoal in water to drink. Do not induce vomiting. Call a physician immediately.

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.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Chemical powder. Water spray. Dry powder.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Leftovers: neutralize with sodium bicarbonate. Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

Refer to protective measures listed in sections 7 and 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid short circuiting the cell. Avoid mechanical damage of the cell. Do not open or disassemble.
Hygiene measures : Wash contaminated clothing before reuse. 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 under roof to protect from precipitation. Keep cool. Charged lead-acid batteries do not freeze up to -50 °C.
Storage temperature : room temperature

7.3. Specific end use(s)

See Section 1.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

lead powder; [particle diameter < 1 mm] (7439-92-1)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Inorganic lead and its compounds
BOEL TWA	0.15 mg/m ³
Regulatory reference	COUNCIL DIRECTIVE 98/24/EC
EU - Biological Limit Value (BLV)	
Local name	Lead and its inorganic compounds
BLV	30 µg/100ml Parameter: Pb
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Lead (7439-92-1)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Inorganic lead and its compounds
BOEL TWA	0.15 mg/m ³
Regulatory reference	COUNCIL DIRECTIVE 98/24/EC
EU - Biological Limit Value (BLV)	
Local name	Lead and its inorganic compounds
BLV	30 µg/100ml Parameter: Pb
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Sulfuric acid (7664-93-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Sulphuric acid (mist)
IOEL TWA	0.05 mg/m ³
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU

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.

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8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

In case of electrolyte leakage: Protective goggles (EN 166)

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

In case of electrolyte leakage: protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
protective gloves	Nitrile rubber	6 (> 480 minutes)	0,11		EN ISO 374

Other skin protection

Materials for protective clothing:

acid resistant clothing. Acid-resistant boots

8.2.2.3. Respiratory protection

Respiratory protection:

In case of electrolyte leakage: In case of inadequate ventilation wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

In case of electrolyte leakage: Wear personal protective equipment, Avoid contact with skin, eyes and clothing, Do not breathe gas/fumes.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Grey.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: 1740 °C
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

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Decomposition temperature	: 338 °C Sulfuric acid
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: ≈ 11.35 g/cm ³
Relative density	: Not applicable
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

Gives off hydrogen by reaction with metals. Risk of formation of explosive hydrogen/air mixtures when stored in enclosed areas. Destroys organic materials, such as cardboard, wood, textiles.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Gives off hydrogen by reaction with metals. Vapours may form explosive mixture with air. Reacts violently with alkalis.

10.4. Conditions to avoid

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

10.5. Incompatible materials

alkalis.

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

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Additional information : Sulphuric acid immediately dissociates to the hydrogen and sulphate ions, with the hydrogen ion being responsible for the local toxicity (irritation and corrosivity) of sulphuric acid.
Sparingly soluble inorganic lead compounds have generally been found to be of relatively low acute toxicity by ingestion, in contact with skin, and by inhalation.

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ATE CLP (oral)	1562.5 mg/kg bodyweight
ATE CLP (dust,mist)	4.688 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

lead powder; [particle diameter < 1 mm] (7439-92-1)	
IARC group	2B - Possibly carcinogenic to humans

Lead (7439-92-1)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : May damage fertility. May damage the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

lead powder; [particle diameter < 1 mm] (7439-92-1)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Lead (7439-92-1)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Toxicokinetics, metabolism and distribution : Inorganic lead compounds are slowly absorbed by ingestion and inhalation and poorly absorbed through the skin, If absorbed, lead will accumulate in the body with low rates of excretion, leading to long-term build up.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.
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.

Sulfuric acid (7664-93-9)	
EC50 Daphnia 1	29 mg/l
NOEC chronic fish	0.025 mg/l

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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
lead powder; [particle diameter < 1 mm] (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
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
Sulfuric acid (7664-93-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects : May cause pH changes in aqueous ecological systems.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
European List of Waste (LoW) code : 16 06 01* - lead batteries

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 2794	UN 2794	UN 2794	UN 2794	UN 2794
14.2. UN proper shipping name				
BATTERIES, WET, FILLED WITH ACID	BATTERIES, WET, FILLED WITH ACID	Batteries, wet, filled with acid	BATTERIES, WET, FILLED WITH ACID	BATTERIES, WET, FILLED WITH ACID
Transport document description				
UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, (E), ENVIRONMENTALLY HAZARDOUS	UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2794 Batteries, wet, filled with acid, 8, ENVIRONMENTALLY HAZARDOUS	UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, ENVIRONMENTALLY HAZARDOUS	UN 2794 BATTERIES, WET, FILLED WITH ACID, 8, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8	8	8	8	8

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ADR	IMDG	IATA	ADN	RID
 	 	 	 	 
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : C11
Special provisions (ADR) : 295, 598
Limited quantities (ADR) : 1L
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

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
MFAG-No : 157

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

Classification code (ADN) : C11
Special provisions (ADN) : 295, 598
Limited quantities (ADN) : 1 L

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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
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 231-100-4, CAS 7439-92-1), Lead (EC 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

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/2021-05/list_of_competent_authorities_and_national_contact_points_en.pdf

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
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
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties
DOT	Department of Transport

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Abbreviations and acronyms:	
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
CAS	CAS (Chemical Abstracts Service) number
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
ADG	Transport of Australian Dangerous Goods

Other information : Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

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 (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.
H360Df	May damage the unborn child. Suspected of damaging fertility.
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.
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

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Full text of H- and EUH-statements:	
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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 4 (Oral)	H302	Calculation method
Acute Tox. 4 (Inhalation:dust,mist)	H332	Calculation method
Skin Corr. 1A	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Repr. 1A	H360FD	Calculation method
STOT RE 1	H372	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

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 therefore not be construed as guaranteeing any specific property of the product.