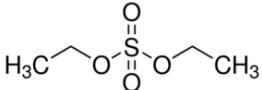


SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Trade name	:	DIETHYL SULPHATE FOR SYNTHESIS
EC Index-No.	:	016-027-00-6
EC-No.	:	200-589-6
CAS-No.	:	64-67-5
Product code	:	03337
Type of product	:	Organic compound
Formula	:	C ₄ H ₁₀ O ₄ S
Chemical structure	:	
Synonyms	:	Diethyl monosulphate

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

Relevant identified uses

Industrial/Professional use spec	:	For professional use only Industrial
Use of the substance/mixture	:	Laboratory chemicals Manufacture of substances

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
 107 Wode House Road, Jehangir Villa, Colaba
 400005 Mumbai
 INDIA
 T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number	:	+ 91 22 6663 6663 (9:00am - 6:00 pm)
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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 (dermal), Category 4	H312
Acute toxicity (inhal.), Category 4	H332
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Germ cell mutagenicity, Category 1B	H340
Carcinogenicity, Category 1B	H350

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

Adverse physicochemical, human health and environmental effects

May cause cancer. May cause genetic defects. Harmful in contact with skin. Harmful if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage.

DIETHYL SULPHATE FOR SYNTHESIS

Safety Data Sheet

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

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

GHS08

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.

H314 - Causes severe skin burns and eye damage.

H340 - May cause genetic defects.

H350 - May cause cancer.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

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.

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 and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	DIETHYL SULPHATE (64-67-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	DIETHYL SULPHATE (64-67-5)

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

Substance type : Mono-constituent

Name	Product identifier	%
DIETHYL SULPHATE substance listed on REACH Candidate List	CAS-No.: 64-67-5 EC-No.: 200-589-6 EC Index-No.: 016-027-00-6	100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

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Safety Data Sheet

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

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Immediately call a POISON CENTER/doctor. Wash with plenty of water/.... Wash contaminated clothing before reuse. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not induce vomiting. Call a physician immediately.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects	: Causes severe skin burns and eye damage. May cause genetic defects. May cause cancer.
Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: Harmful in contact with skin. Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Harmful if swallowed. Burns.

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	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. 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	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area. Evacuate unnecessary personnel. Stop leak if safe to do so.

DIETHYL SULPHATE FOR SYNTHESIS

Safety Data Sheet

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

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	: Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into suitable containers. Notify authorities if product enters sewers or public waters.
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

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Ensure good ventilation of the work station. Take precautionary measures against static discharge. Obtain special instructions before use. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Packaging materials	: Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

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Safety Data Sheet

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

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Skin protection

Skin and body protection:

Wear a mask

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

Wear appropriate mask

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	: Liquid
Colour	: Colourless.
Appearance	: Clear liquid.
Molecular mass	: 154.19 g/mol
Odour	: Faint ether-like odor.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -25 °C
Boiling point	: 209 °C (Decomposes)
Flammability	: Non flammable.
Lower explosion limit	: 4.1 vol %
Upper explosion limit	: 12.2 vol %
Flash point	: 104 °C
Auto-ignition temperature	: 436.1 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 1.53 mm ² /s
Viscosity, dynamic	: 1.79 cP at 20 °C
Solubility	: Water: Immiscible with water Ethanol: Miscible with ethanol Ether: Miscible with ether
Partition coefficient n-octanol/water (Log K _{ow})	: Not available
Vapour pressure	: 0.25 hPa at 20 °C
Vapour pressure at 50°C	: Not available
Density	: 1.17 g/cm ³
Relative density	: Not available
Relative vapour density at 20°C	: 5.31 (Air= 1)
Particle characteristics	: Not applicable

9.2. Other information

Other safety characteristics

Refractive index	: 1.395 – 1.405 (20 °C, 589 nm)
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DIETHYL SULPHATE FOR SYNTHESIS

Safety Data Sheet

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

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

Heat. Direct sunlight. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

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)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Harmful if inhaled.
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	: May cause genetic defects.
Carcinogenicity	: May cause cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

DIETHYL SULPHATE FOR SYNTHESIS (64-67-5)

Viscosity, kinematic	1.53 mm ² /s
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DIETHYL SULPHATE (64-67-5)

Viscosity, kinematic	1.53 mm ² /s
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11.2. Information on other hazards

Other information

Potential adverse human health effects and symptoms : Harmful if swallowed, Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute)	: Not classified

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Hazardous to the aquatic environment, long-term : Not classified
(chronic)

12.2. Persistence and degradability

DIETHYL SULPHATE FOR SYNTHESIS (64-67-5)

Persistence and degradability	Rapidly degradable
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DIETHYL SULPHATE (64-67-5)

Persistence and degradability	Rapidly degradable
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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	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	DIETHYL SULPHATE (64-67-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	DIETHYL SULPHATE (64-67-5)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
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 of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR)	: UN 1594
UN-No. (IMDG)	: UN 1594
UN-No. (IATA)	: UN 1594
UN-No. (ADN)	: UN 1594
UN-No. (RID)	: UN 1594

14.2. UN proper shipping name

Proper Shipping Name (ADR) : DIETHYL SULPHATE

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Safety Data Sheet

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

Proper Shipping Name (IMDG)	: DIETHYL SULPHATE
Proper Shipping Name (IATA)	: Diethyl sulphate
Proper Shipping Name (ADN)	: DIETHYL SULPHATE
Proper Shipping Name (RID)	: DIETHYL SULPHATE
Transport document description (ADR) (ADR)	: UN 1594 DIETHYL SULPHATE, 6.1, II, (D/E)
Transport document description (IMDG)	: UN 1594 DIETHYL SULPHATE, 6.1, II
Transport document description (IATA)	: UN 1594 Diethyl sulphate, 6.1, II
Transport document description (ADN)	: UN 1594 DIETHYL SULPHATE, 6.1, II
Transport document description (RID)	: UN 1594 DIETHYL SULPHATE, 6.1, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 6.1
Danger labels (ADR)	: 6.1
	:



IMDG

Transport hazard class(es) (IMDG)	: 6.1
Danger labels (IMDG)	: 6.1
	:



IATA

Transport hazard class(es) (IATA)	: 6.1
Danger labels (IATA)	: 6.1
	:



ADN

Transport hazard class(es) (ADN)	: 6.1
Danger labels (ADN)	: 6.1
	:



RID

Transport hazard class(es) (RID)	: 6.1
Danger labels (RID)	: 6.1
	:



14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

DIETHYL SULPHATE FOR SYNTHESIS

Safety Data Sheet

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14.5. Environmental hazards

Dangerous for the environment	:	No
Marine pollutant	:	No
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-A
Other information	:	No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	T1
Limited quantities (ADR)	:	100ml
Excepted quantities (ADR)	:	E4
Packing instructions (ADR)	:	P001, IBC02
Mixed packing provisions (ADR)	:	MP15
Portable tank and bulk container instructions (ADR)	:	T7
Portable tank and bulk container special provisions (ADR)	:	TP2
Tank code (ADR)	:	L4BH
Tank special provisions (ADR)	:	TU15, TE19
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	2
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13, CV28
Special provisions for carriage - Operation (ADR)	:	S9, S19
Hazard identification number (Kemler No.)	:	60
Orange plates	:	
Tunnel restriction code (ADR)	:	D/E
EAC code	:	2X

Transport by sea

Limited quantities (IMDG)	:	100 ml
Excepted quantities (IMDG)	:	E4
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP2
Stowage category (IMDG)	:	C
Properties and observations (IMDG)	:	Colourless, oily liquid. Readily hydrolysed by moisture to sulphuric acid, which is a corrosive liquid. Toxic if swallowed, by skin contact or by inhalation.
MFAG-No	:	152

Air transport

PCA Excepted quantities (IATA)	:	E4
PCA Limited quantities (IATA)	:	Y641
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	654
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	662
CAO max net quantity (IATA)	:	60L
ERG code (IATA)	:	6L

Inland waterway transport

Classification code (ADN)	:	T1
Special provisions (ADN)	:	802
Limited quantities (ADN)	:	100 ml
Excepted quantities (ADN)	:	E4
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EP, TOX, A

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Ventilation (ADN) : VE02
Number of blue cones/lights (ADN) : 2

Rail transport

Classification code (RID) : T1
Limited quantities (RID) : 100ml
Excepted quantities (RID) : E4
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP2
Tank codes for RID tanks (RID) : L4BH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
Colis express (express parcels) (RID) : CE5
Hazard identification number (RID) : 60

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	DIETHYL SULPHATE FOR SYNTHESIS

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Listed on the REACH Candidate List: Diethyl sulphate

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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National regulations

Germany

VOC ordinance (ChemVOCFarbV)

:

Water hazard class (WGK)

: WGK 3, Highly hazardous to water (Classification according to AwSV; ID No. 3152).

Chemicals Prohibition Ordinance (ChemVerbotsV)

: This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).

Major Accidents Ordinance (12. BImSchV)

: Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen

: DIETHYL SULPHATE is listed

SZW-lijst van mutagene stoffen

: DIETHYL SULPHATE is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding

: The substance is not listed

SZW-lijst van reprotoxische stoffen –

: The substance is not listed

Fruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling

: The substance is not listed

Denmark

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

Poland

Polish National Regulations

: Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488).
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

DIETHYL SULPHATE FOR SYNTHESIS

Safety Data Sheet

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SECTION 16: Other information

Abbreviations and acronyms:

ACGIH	American Conference of Government Industrial Hygienists
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)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
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
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment

DIETHYL SULPHATE FOR SYNTHESIS

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Abbreviations and acronyms:	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 1B	Carcinogenicity, Category 1B
Muta. 1B	Germ cell mutagenicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.

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.