

SAFETY DATA SHEET

LymphoTrack[®] Dx Assays – S5/PGM[™]

Catalog Number	Description
91210007	LymphoTrack Dx <i>IGH</i> FR1 Assay - S5/PGM
91210037	LymphoTrack Dx <i>IGH</i> FR2 Assay - S5/PGM
91210047	LymphoTrack Dx <i>IGH</i> FR3 Assay - S5/PGM
91210057	LymphoTrack Dx <i>IGH</i> FR1/2/3 - S5/PGM
91220007	LymphoTrack Dx <i>IGK</i> Assay - S5/PGM
92270007	LymphoTrack Dx <i>TRG</i> Assay - S5/PGM

Issuing Date 27-Apr-2023

Revision Date 27-Apr-2023

Revision Number 1

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

1.1. Product identifier

Product Code(s)	Product Name	Synonyms
40880009	IGH Positive Control	None
40880018	IGK Positive	None
40920018	NGS Negative Control	None
42270019	TRG POS (+) Control	None

Pure substance/mixture Mixture

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

Recommended use Assay reagent
Uses advised against For professional use only

1.3. Details of the supplier of the safety data sheet

Importer

Invivoscribe Technologies
Zeppelinstrasse 1
85399 Hallbergmoos
Germany
Phone: +49 89 904 299 800

Supplier

Invivoscribe, Inc.
10222 Barnes Canyon Rd
Bldg. 1
San Diego, CA 92121
Phone: +1 858-224-6600

Distributor

Invivoscribe Technologies, SARL
c/o Ficorec Domiciliation Services
132, Boulevard Michelet
Hall Nord – 5ème étage
13008 Marseille
FRANCE
Tel: +33 (0)4 42 01 78 10

For further information, please contact

E-mail address customerservice@invivoscribe.com

1.4. Emergency telephone number

Emergency telephone +49 89 904 299 800 (M-F 8:00 – 16:30 CET)

Emergency telephone - §45 - (EC)1272/2008	
Europe	112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

2.2. Label elements

Hazard statements

Not classified.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

No information available.

SECTION 2: Hazards identification**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients**3.1 Substances**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

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

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE_{mix}) for classifying a mixture based on its components

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	Remove to fresh air. Get medical attention if symptoms occur.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. Get medical attention if symptoms occur.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Get medical attention if symptoms occur.

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

Symptoms	None known.
Effects of Exposure	No information available.

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

Note to physicians	Treat symptomatically.
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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.
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5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.

SECTION 6: Accidental release measures

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Dam up. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information See section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage class (TRGS 510) Storage class 10.

7.3. Specific end use(s)

Specific use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region-specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers No information available.

Derived No Effect Level (DNEL) - General Public No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

Hand protection Wear suitable gloves. Gloves must conform to standard EN 374.

SECTION 8: Exposure controls/personal protection

Skin and body protection	Wear suitable protective clothing. (EN ISO 6529).
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	
Physical state	Liquid
Color	Colorless
Odor	Odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flammability		No data available
Flammability Limit in Air		No data available
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
pH		No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Vapor pressure		No data available
Relative density		No data available
Bulk density		No data available
Liquid density		No data available
Relative vapor density		No data available
Particle characteristics		No data available
Particle size		No data available
Particle size distribution		No data available

9.2. Other information

- 9.2.1. Information with regard to physical hazard classes**
Not applicable
- 9.2.2. Other safety characteristics**
No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity	None under normal use conditions.
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SECTION 10: Stability and reactivity

10.2. Chemical stability

Stability	Stable under normal conditions.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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10.4. Conditions to avoid

Conditions to avoid	None known based on information supplied.
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10.5. Incompatible materials

Incompatible materials	None known based on information supplied.
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10.6. Hazardous decomposition products

Hazardous decomposition products	None known based on information supplied.
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SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	None known.
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Acute toxicity

Numerical measures of toxicity

Based on available data, the classification criteria are not met.

Component Information

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties	This product does not contain any known or suspected endocrine disruptors.
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11.2.2. Other information

Other adverse effects	No information available.
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SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.
Unknown aquatic toxicity	Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability	No information available.
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12.3. Bioaccumulative potential

Bioaccumulation	No information available.
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12.4. Mobility in soil

Mobility in soil	No information available.
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12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment	The product does not contain any substance(s) classified as PBT or vPvB.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	This product does not contain any known or suspected endocrine disruptors.
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12.7. Other adverse effects

Other adverse effects	No information available.
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SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
Waste codes / waste designations according to EWC / AVV	According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG		Not regulated
14.1 UN number or ID number		Not regulated
14.2 UN proper shipping name		Not regulated
14.3 Transport hazard class(es)		Not regulated
14.4 Packing group		Not applicable
14.5 Environmental hazards		Not applicable
14.6 Special Precautions for Users		
Special Provisions		None
14.7 Maritime transport in bulk according to IMO instruments		No information available
RID		Not regulated
14.1 UN number		Not regulated
14.2 UN proper shipping name		Not regulated
14.3 Transport hazard class(es)		Not regulated

SECTION 14: Transport information

14.4	Packing group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special Precautions for Users	
	Special Provisions	None

ADR		Not regulated
14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special Precautions for Users	
	Special Provisions	None

IATA		Not regulated
14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special Precautions for Users	
	Special Provisions	None
	Note:	None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Germany**

Water hazard class (WGK) non-hazardous to water (nwg)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

Contact supplier for inventory compliance status

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

ATE: Acute Toxicity Estimate

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

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Skin designation

SCBA Self-contained breathing apparatus

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	On basis of test data
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGl(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

SECTION 16: Other information

National Library of Medicine's PubMed database (NLM PUBMED)
United States of America National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Issuing Date	27-Apr-2023
Revision Date	27-Apr-2023
Revision Note	Initial Release.

This safety data sheet complies with the requirements of Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Issuing Date 27-Apr-2023

Revision Date 27-Apr-2023

Revision Number 1

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

1.1. Product identifier

Product Code(s)	Product Name	Synonyms
21210007CE	IGH FR1 S5/PGM 01	None
21210017CE	IGH FR1 S5/PGM 02	None
21210027CE	IGH FR1 S5/PGM 03	None
21210037CE	IGH FR1 S5/PGM 04	None
21210047CE	IGH FR1 S5/PGM 07	None
21210057CE	IGH FR1 S5/PGM 08	None
21210067CE	IGH FR1 S5/PGM 09	None
21210077CE	IGH FR1 S5/PGM 10	None
21210087CE	IGH FR1 S5/PGM 11	None
21210097CE	IGH FR1 S5/PGM 12	None
21210107CE	IGH FR1 S5/PGM 13	None
21210117CE	IGH FR1 S5/PGM 14	None
21210127CE	IGH FR2 S5/PGM 01	None
21210137CE	IGH FR2 S5/PGM 02	None
21210147CE	IGH FR2 S5/PGM 03	None
21210157CE	IGH FR2 S5/PGM 04	None
21210167CE	IGH FR2 S5/PGM 07	None
21210177CE	IGH FR2 S5/PGM 08	None
21210187CE	IGH FR2 S5/PGM 09	None
21210197CE	IGH FR2 S5/PGM 10	None
21210207CE	IGH FR2 S5/PGM 11	None
21210217CE	IGH FR2 S5/PGM 12	None
21210227CE	IGH FR2 S5/PGM 13	None
21210237CE	IGH FR2 S5/PGM 14	None
21210247CE	IGH FR3 S5/PGM 01	None
21210257CE	IGH FR3 S5/PGM 02	None
21210267CE	IGH FR3 S5/PGM 03	None
21210277CE	IGH FR3 S5/PGM 04	None
21210287CE	IGH FR3 S5/PGM 07	None
21210297CE	IGH FR3 S5/PGM 08	None
21210307CE	IGH FR3 S5/PGM 09	None
21210317CE	IGH FR3 S5/PGM 10	None
21210327CE	IGH FR3 S5/PGM 11	None
21210337CE	IGH FR3 S5/PGM 12	None
21210347CE	IGH FR3 S5/PGM 13	None
21210357CE	IGH FR3 S5/PGM 14	None
21220007CE	IGK S5/PGM 01	None
21220017CE	IGK S5/PGM 02	None
21220027CE	IGK S5/PGM 04	None
21220037CE	IGK S5/PGM 08	None
21220047CE	IGK S5/PGM 09	None

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

21220057CE	IGK S5/PGM 10	None
21220067CE	IGK S5/PGM 11	None
21220077CE	IGK S5/PGM 12	None
21220087CE	IGK S5/PGM 13	None
21220097CE	IGK S5/PGM 14	None
21220107CE	IGK S5/PGM 16	None
21220117CE	IGK S5/PGM 17	None
22270007CE	TRG S5/PGM 01	None
22270017CE	TRG S5/PGM 02	None
22270027CE	TRG S5/PGM 03	None
22270037CE	TRG S5/PGM 04	None
22270047CE	TRG S5/PGM 07	None
22270057CE	TRG S5/PGM 08	None
22270067CE	TRG S5/PGM 09	None
22270077CE	TRG S5/PGM 10	None
22270087CE	TRG S5/PGM 11	None
22270097CE	TRG S5/PGM 12	None
22270107CE	TRG S5/PGM 13	None
22270117CE	TRG S5/PGM 14	None

Pure substance/mixture

Mixture

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

Recommended use

Assay reagent

Uses advised against

For professional use only

1.3. Details of the supplier of the safety data sheet**Importer**

Invivoscribe Technologies
 Zeppelinstrasse 1
 85399 Hallbergmoos
 Germany
 Phone: +49 89 904 299 800

Supplier

Invivoscribe, Inc.
 10222 Barnes Canyon Rd
 Bldg. 1
 San Diego, CA 92121
 Phone: +1 858-224-6600

Distributor

Invivoscribe Technologies, SARL
 c/o Ficorec Domiciliation Services
 132, Boulevard Michelet
 Hall Nord – 5ème étage
 13008 Marseille
 FRANCE
 Tel: +33 (0)4 42 01 78 10

For further information, please contact

E-mail address

customerservice@invivoscribe.com

1.4. Emergency telephone number

Emergency telephone

+49 89 904 299 800 (M-F 8:00 – 16:30 CET)

Emergency telephone - §45 - (EC)1272/2008

Europe

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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]**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

SECTION 2: Hazards identification**2.2. Label elements****Hazard statements**

Not classified.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Dimethyl sulfoxide 67-68-5	1-5	No data available	200-664-3	[C]	-	-	-

*Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes**[C] - Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring***Full text of H- and EUH-phrases: see section 16****Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE_{mix}) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Dimethyl sulfoxide 67-68-5	28300	40000	5.3353	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	Remove to fresh air. Get medical attention if symptoms occur.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if symptoms occur.
Skin contact	Wash skin with soap and water. Get medical attention if symptoms occur.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Get medical attention if symptoms occur.

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

Symptoms	None known.
Effects of Exposure	No information available.

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

Note to physicians	Treat symptomatically.
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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.
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5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Dam up. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information See section 13 for more information
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SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage class (TRGS 510)	Storage class 10.

7.3. Specific end use(s)

Specific use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Dimethyl sulfoxide 67-68-5	-	TWA: 50 ppm TWA: 160 mg/m ³ H*	-	-	-

SECTION 8: Exposure controls/personal protection

Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Dimethyl sulfoxide 67-68-5	-	-	TWA: 50 ppm TWA: 160 mg/m ³ STEL: 100 ppm STEL: 320 mg/m ³	TWA: 50 ppm TWA: 150 mg/m ³ STEL: 150 ppm STEL: 500 mg/m ³ A*	TWA: 50 ppm iho*
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Dimethyl sulfoxide 67-68-5	-	TWA: 50 ppm TWA: 160 mg/m ³ H*	TWA: 50 ppm TWA: 160 mg/m ³ Peak: 100 ppm Peak: 320 mg/m ³ *	-	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Dimethyl sulfoxide 67-68-5	-	-	-	-	O* TWA: 50 ppm TWA: 150 mg/m ³ STEL: 150 ppm STEL: 500 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Dimethyl sulfoxide 67-68-5	-	-	-	TWA: 160 mg/m ³ TWA: 50 ppm STEL: 100 ppm STEL: 320 mg/m ³ K*	-
Chemical name	Sweden		Switzerland		United Kingdom
Dimethyl sulfoxide 67-68-5	NGV: 50 ppm NGV: 150 mg/m ³ Vägledande KGV: 150 ppm Vägledande KGV: 500 mg/m ³ H*		TWA: 50 ppm TWA: 160 mg/m ³ STEL: 100 ppm STEL: 320 mg/m ³ H*		-

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Dimethyl sulfoxide 67-68-5	-	200 mg/kg bw/day [4] [6]	484 mg/m ³ [4] [6] 265 mg/m ³ [5] [6]

Notes

- [4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.
 [7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Dimethyl sulfoxide 67-68-5	60 mg/kg bw/day [4] [6]	-	120 mg/m ³ [4] [6] 47 mg/m ³ [5] [6]

Notes

- [4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.

SECTION 8: Exposure controls/personal protection

[7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Dimethyl sulfoxide 67-68-5	17 mg/L	-	1.7 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Dimethyl sulfoxide 67-68-5	13.4 mg/kg sediment dw	-	11 mg/L	3.02 mg/kg soil dw	0.7 g/kg food

8.2. Exposure controls**Engineering controls**

Showers
Eyewash stations
Ventilation systems.

Personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

Hand protection

Wear suitable gloves. Gloves must conform to standard EN 374.

Skin and body protection

Wear suitable protective clothing (EN ISO 6529).

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	Clear liquid
Physical state	Liquid
Color	Colorless. Light blue, light yellow, light pink. or light orange
Odor	Odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
pH	7 - 9.5	No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available

SECTION 9: Physical and chemical properties

Dynamic viscosity	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Vapor pressure	No data available
Relative density	No data available
Bulk density	No data available
Liquid Density	No data available
Relative vapor density	No data available
Particle characteristics	
Particle Size	No data available
Particle Size Distribution	No data available

9.2. Other information

- 9.2.1. Information with regard to physical hazard classes**
Not applicable
- 9.2.2. Other safety characteristics**
No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity None under normal use conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

 Sensitivity to mechanical impact None.

 Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Information on likely routes of exposure****Product Information**

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.

SECTION 11: Toxicological information

Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms None known.

Acute toxicity**Numerical measures of toxicity**

Based on available data, the classification criteria are not met.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Dimethyl sulfoxide	= 28300 mg/kg (Rat)	= 40000 mg/kg (Rat)	> 5.33 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties	
Endocrine disrupting properties	This product does not contain any known or suspected endocrine disruptors.
11.2.2. Other information	
Other adverse effects	No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.
Unknown aquatic toxicity	Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Dimethyl sulfoxide 67-68-5	-	LC50: =34000mg/L (96h, Pimephales promelas) LC50: 33 - 37g/L (96h, Oncorhynchus mykiss) LC50: >40g/L (96h, Lepomis macrochirus) LC50: =41.7g/L (96h, Cyprinus carpio)	-	-

12.2. Persistence and degradability

Persistence and degradability	No information available.
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12.3. Bioaccumulative potential

Bioaccumulation
Component Information

SECTION 12: Ecological information

Chemical name	Partition coefficient
Dimethyl sulfoxide	-1.35

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Dimethyl sulfoxide 67-68-5	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Waste codes / waste designations according to EWC / AVV According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information**IMDG**

	Not regulated
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

	Not regulated
14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special Precautions for Users	
Special Provisions	None

ADR

Not regulated

SECTION 14: Transport information

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special Precautions for Users Special Provisions	None

IATA		Not regulated
14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special Precautions for Users Special Provisions	None

Note: None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number
Dimethyl sulfoxide 67-68-5	RG 84

Germany

Water hazard class (WGK) non-hazardous to water (nwg)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Dimethyl sulfoxide - 67-68-5	75.	-

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

Contact supplier for inventory compliance status

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

ATE: Acute Toxicity Estimate

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

*

Skin designation

SCBA Self-contained breathing apparatus

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	On basis of test data
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGl(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

SECTION 16: Other information

National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
United States of America National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Disclaimer

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End of Safety Data Sheet