

# SAFETY DATA SHEET

## LymphoTrack<sup>®</sup> Assay – S5/PGM<sup>™</sup>

Catalog Number	Description
71210007	LymphoTrack <i>IGH</i> FR1 Assay - S5/PGM
71210037	LymphoTrack <i>IGH</i> FR2 Assay - S5/PGM
71210047	LymphoTrack <i>IGH</i> FR3 Assay - S5/PGM
71210057	LymphoTrack <i>IGH</i> FR1/2/3 - S5/PGM
71220007	LymphoTrack <i>IGK</i> Assay - S5/PGM
72270007	LymphoTrack <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)

<b>Emergency telephone - \$45 - (EC)1272/2008</b>	
<b>Europe</b>	<b>112</b>

## 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.

**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<sub>mix</sub>) 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

<b>Inhalation</b>	Remove to fresh air. Get medical attention if symptoms occur.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if symptoms occur.
<b>Ingestion</b>	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

<b>Symptoms</b>	None known.
<b>Effects of Exposure</b>	No information available.

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

<b>Note to physicians</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	No information available.
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### 5.3. Advice for firefighters

<b>Special protective equipment and precautions for fire-fighters</b>	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

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

### 6.2. Environmental precautions

<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
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### 6.3. Methods and material for containment and cleaning up

**SECTION 6: Accidental release measures**

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

**6.4. Reference to other sections**

<b>Reference to other sections</b>	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**

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

**7.2. Conditions for safe storage, including any incompatibilities**

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

**7.3. Specific end use(s)**

<b>Specific use(s)</b>	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**

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

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

<b>Derived No Effect Level (DNEL) - Workers</b>	No information available.
<b>Derived No Effect Level (DNEL) - General Public</b>	No information available.
<b>Predicted No Effect Concentration (PNEC)</b>	No information available.

**8.2. Exposure controls**

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems.
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**Personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.
<b>Hand protection</b>	Wear suitable gloves. Gloves must conform to standard EN 374.
<b>Skin and body protection</b>	Wear suitable protective clothing. (EN ISO 6529).
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	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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### 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

**SECTION 10: Stability and reactivity**

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**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	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****Delayed and immediate effects as well as chronic effects from short and long-term exposure**

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

**SECTION 12: Ecological information**

**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.

**12.3. Bioaccumulative potential**

**Bioaccumulation** No information available.

**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.

**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**

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

**SECTION 14: Transport information**

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

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



**SECTION 16: Other information**

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)  
 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)

**SECTION 16: Other information**

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

<b>Issuing Date</b>	27-Apr-2023
<b>Revision Date</b>	27-Apr-2023
<b>Revision Note</b>	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.

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 as amended by Commission Regulation (EU)  
2020/878 and Regulation (EC) No. 1272/2008

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
21210007	IGH FR1 S5/PGM 01	None
21210017	IGH FR1 S5/PGM 02	None
21210027	IGH FR1 S5/PGM 03	None
21210037	IGH FR1 S5/PGM 04	None
21210047	IGH FR1 S5/PGM 07	None
21210057	IGH FR1 S5/PGM 08	None
21210067	IGH FR1 S5/PGM 09	None
21210077	IGH FR1 S5/PGM 10	None
21210087	IGH FR1 S5/PGM 11	None
21210097	IGH FR1 S5/PGM 12	None
21210107	IGH FR1 S5/PGM 13	None
21210117	IGH FR1 S5/PGM 14	None
21210127	IGH FR2 S5/PGM 01	None
21210137	IGH FR2 S5/PGM 02	None
21210147	IGH FR2 S5/PGM 03	None
21210157	IGH FR2 S5/PGM 04	None
21210167	IGH FR2 S5/PGM 07	None
21210177	IGH FR2 S5/PGM 08	None
21210187	IGH FR2 S5/PGM 09	None
21210197	IGH FR2 S5/PGM 10	None
21210207	IGH FR2 S5/PGM 11	None
21210217	IGH FR2 S5/PGM 12	None
21210227	IGH FR2 S5/PGM 13	None
21210237	IGH FR2 S5/PGM 14	None
21210247	IGH FR3 S5/PGM 01	None
21210257	IGH FR3 S5/PGM 02	None
21210267	IGH FR3 S5/PGM 03	None
21210277	IGH FR3 S5/PGM 04	None
21210287	IGH FR3 S5/PGM 07	None
21210297	IGH FR3 S5/PGM 08	None
21210307	IGH FR3 S5/PGM 09	None
21210317	IGH FR3 S5/PGM 10	None
21210327	IGH FR3 S5/PGM 11	None
21210337	IGH FR3 S5/PGM 12	None
21210347	IGH FR3 S5/PGM 13	None
21210357	IGH FR3 S5/PGM 14	None
21220007	IGK S5/PGM 01	None
21220017	IGK S5/PGM 02	None
21220027	IGK S5/PGM 04	None
21220037	IGK S5/PGM 08	None
21220047	IGK S5/PGM 09	None
21220057	IGK S5/PGM 10	None

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

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

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

**Supplier**

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

**Distributor**

Inivoscribe 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@inivoscribe.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 mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**2.2. Label elements****Hazard statements**

Not classified.

**SECTION 2: Hazards identification****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<sub>mix</sub>) 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**

<b>Inhalation</b>	Remove to fresh air. Get medical attention if symptoms occur.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if symptoms occur.
<b>Ingestion</b>	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**

<b>Symptoms</b>	None known.
<b>Effects of Exposure</b>	No information available.

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

<b>Note to physicians</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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**SECTION 5: Firefighting measures**

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.

**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.

**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.

**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**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Dimethyl sulfoxide 67-68-5	-	TWA: 50 ppm TWA: 160 mg/m <sup>3</sup> H*	-	-	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland

**SECTION 8: Exposure controls/personal protection**

Dimethyl sulfoxide 67-68-5	-	-	TWA: 50 ppm TWA: 160 mg/m <sup>3</sup> STEL: 100 ppm STEL: 320 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 150 mg/m <sup>3</sup> STEL: 150 ppm STEL: 500 mg/m <sup>3</sup> A*	TWA: 50 ppm iho*
<b>Chemical name</b>	<b>France</b>	<b>Germany TRGS</b>	<b>Germany DFG</b>	<b>Greece</b>	<b>Hungary</b>
Dimethyl sulfoxide 67-68-5	-	TWA: 50 ppm TWA: 160 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 160 mg/m <sup>3</sup> Peak: 100 ppm Peak: 320 mg/m <sup>3</sup> *	-	-
<b>Chemical name</b>	<b>Ireland</b>	<b>Italy MDLPS</b>	<b>Italy AIDII</b>	<b>Latvia</b>	<b>Lithuania</b>
Dimethyl sulfoxide 67-68-5	-	-	-	-	O* TWA: 50 ppm TWA: 150 mg/m <sup>3</sup> STEL: 150 ppm STEL: 500 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Portugal</b>	<b>Romania</b>	<b>Slovakia</b>	<b>Slovenia</b>	<b>Spain</b>
Dimethyl sulfoxide 67-68-5	-	-	-	TWA: 160 mg/m <sup>3</sup> TWA: 50 ppm STEL: 100 ppm STEL: 320 mg/m <sup>3</sup> K*	-
<b>Chemical name</b>	<b>Sweden</b>		<b>Switzerland</b>		<b>United Kingdom</b>
Dimethyl sulfoxide 67-68-5	NGV: 50 ppm NGV: 150 mg/m <sup>3</sup> Vägledande KGV: 150 ppm Vägledande KGV: 500 mg/m <sup>3</sup> H*		TWA: 50 ppm TWA: 160 mg/m <sup>3</sup> STEL: 100 ppm STEL: 320 mg/m <sup>3</sup> 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 <sup>3</sup> [4] [6] 265 mg/m <sup>3</sup> [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 <sup>3</sup> [4] [6] 47 mg/m <sup>3</sup> [5] [6]

**Notes**

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

## SECTION 8: Exposure controls/personal protection

### 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



**SECTION 9: Physical and chemical properties**

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	
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.

**SECTION 11: Toxicological information**

<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	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**

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

**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

14.1 UN number or ID number Not regulated

**SECTION 14: Transport information**

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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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**

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**End of Safety Data Sheet**