

SAFETY DATA SHEET

IdentiClone[®] Assays

Catalog Number	Description
91000031	IdentiClone <i>IGH</i> + <i>IGK</i> B-Cell Clonality Assay - ABI Fluorescence Detection
91000041	IdentiClone <i>IGH</i> + <i>IGK</i> B-Cell Clonality Assay MegaKit - ABI Fluorescence Detection
91010061	IdentiClone <i>IGH</i> Gene Clonality Assay - ABI Fluorescence Detection
91010081	IdentiClone <i>IGH</i> Gene Clonality Assay MegaKit - ABI Fluorescence Detection
91020021	IdentiClone <i>IGK</i> Gene Clonality Assay - ABI Fluorescence Detection
91020031	IdentiClone <i>IGK</i> Gene Clonality Assay MegaKit - ABI Fluorescence Detection
91030011	IdentiClone <i>IGL</i> Gene Clonality Assay - ABI Fluorescence Detection
92000011	IdentiClone <i>TCRB</i> + <i>TCRG</i> T-Cell Clonality Assay - ABI Fluorescence Detection
92000021	IdentiClone <i>TCRB</i> + <i>TCRG</i> T- Cell Clonality MegaKit - ABI Fluorescence Detection
92050011	IdentiClone <i>TCRB</i> Gene Clonality Assay - ABI Fluorescence Detection
92050021	IdentiClone <i>TCRB</i> Gene Clonality Assay MegaKit - ABI Fluorescence Detection
92060011	IdentiClone <i>TCRD</i> Gene Clonality Assay - ABI Fluorescence Detection
92060021	IdentiClone <i>TCRD</i> Gene Clonality Assay MegaKit - ABI Fluorescence Detection
92070021	IdentiClone <i>TCRG</i> Gene Clonality Assay - ABI Fluorescence Detection
92070041	IdentiClone <i>TCRG</i> Gene Clonality Assay MegaKit - ABI Fluorescence Detection
92070101	IdentiClone T-Cell Receptor Gamma Gene Rearrangement Assay 2.0 - ABI Fluorescence Detection
92070111	IdentiClone T-Cell Receptor Gamma Gene Rearrangement Assay 2.0 - ABI Fluorescence Detection

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
40880190	IVS-0004 Clonal Control DNA	None
40880370	IVS-0007 Clonal Control DNA	None
40880430	IVS-0008 Clonal Control DNA	None
40880490	IVS-0009 Clonal Control DNA	None
40881090	IVS-0019 Clonal Control DNA	None
40881210	IVS-0021 Clonal Control DNA	None
40881390	IVS-0024 Clonal Control DNA	None
40881750	IVS-0030 Clonal Control DNA	None
40883320	5% TCRG Positive Control DNA	None
40920010	IVS-0000 Polyclonal Control DNA	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].

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

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_{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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SECTION 5: Firefighting measures

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

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

SECTION 8: Exposure controls/personal protection

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	
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

SECTION 9: Physical and chemical properties**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.
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Explosion data

Sensitivity to mechanical impact	None.
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Sensitivity to static discharge	None.
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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.
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Eye contact	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
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Skin contact	Specific test data for the substance or mixture is not available.
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Ingestion	Specific test data for the substance or mixture is not available.
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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**

SECTION 11: Toxicological information

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.

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
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.

SECTION 15: Regulatory information

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	*	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

SECTION 16: Other information

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)
 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
20960021	Specimen Control Size Ladder- 6FAM	None
21010011CE	IdentiClone® IGH Tube A- 6FAM	None
21010101CE	IdentiClone® IGH Tube B- 6FAM	None
21010031CE	IdentiClone® IGH Tube C – HEX	None
21010041CE	IdentiClone® IGH Tube D- HEX	None
21010051CE	IdentiClone® IGH Tube E- 6FAM	None
21020011CE	IdentiClone® IGK Tube A- 6FAM	None
21020021CE	IdentiClone® IGK Tube B- 6FAM	None
22050011CE	IdentiClone® TCRB Tube A- 6FAM & HEX	None
22050021CE	IdentiClone® TCRB Tube B- 6FAM	None
22050031CE	IdentiClone® TCRB Tube C – 6FAM & HEX	None
22060011CE	IdentiClone® TCRD Tube - 6FAM & HEX	None
22070031CE	IdentiClone® TCRG Tube A- 6FAM & HEX	None
22070041CE	IdentiClone® TCRG Tube B- 6FAM & HEX	None
22070091CE	IdentiClone® TCRG - 6FAM	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 mixture 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**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.

SECTION 4: First aid measures

Effects of Exposure No information available.

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

Note to physicians Treat symptomatically.

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.

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 ³ H*	-	-	-
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

SECTION 8: Exposure controls/personal protection

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.
[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

SECTION 9: Physical and chemical properties

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
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.
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)	-	-

SECTION 12: Ecological information**12.2. Persistence and degradability**

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component 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

SECTION 14: Transport information

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

<u>ADR</u>		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

<u>IATA</u>		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

SECTION 15: Regulatory information

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)

SECTION 16: Other information

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)
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