

Safety Data Sheet

according to Regulation (EC) No 1907/2006

DMF

Revision date: 11.03.2019

Product code: SOL-004

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

DMF

Further trade namesDimethylformamide (Peptide Grade)
N,N-Dimethylformamide
N,N-DimethylmethanamideREACH Registration Number: 01-2119475605-32-XXXX
CAS No: 68-12-2
Index No: 616-001-00-X
EC No: 200-679-5**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Manufacture of the substance. Laboratory chemical. Scientific research and development.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheetCompany name: Iris Biotech GmbH
Street: Adalbert-Zoellner-Straße 1
Place: D-95615 Marktredwitz, Germany
Post-office box: 568
D-95605 Marktredwitz, Germany
Telephone: +49 9231 97121 0
Telefax: +49 9231 97121 99
e-mail: info@iris-biotech.de
Contact person: Compliance Department
Telephone: +49 9231 97121 0
e-mail: sds@iris-biotech.de
Internet: www.iris-biotech.de
Responsible Department: Only available during office hours.**1.4. Emergency telephone number:** +49 (0)89 19240 (POISON CENTER Munich: 24 h)**Further Information**

Emergency telephone: 24 h

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**Hazard categories:
Flammable liquid: Flam. Liq. 3
Reproductive toxicity: Repr. 1B
Acute toxicity: Acute Tox. 4
Acute toxicity: Acute Tox. 4
Serious eye damage/eye irritation: Eye Irrit. 2
Hazard Statements:
Harmful in contact with skin.
Causes serious eye irritation.
May damage the unborn child.
Flammable liquid and vapour.
Harmful if inhaled.**2.2. Label elements**

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Regulation (EC) No. 1272/2008
Signal word: Danger

Pictograms:

Hazard statements

H226	Flammable liquid and vapour.
H312+H332	Harmful in contact with skin or if inhaled.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.

Precautionary statements

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P370+P378	In case of fire: Use Foam to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.

Special labelling of certain mixtures

Restricted to professional users.

Additional advice on labelling

 Warning - substance not yet tested completely.
 for professional use only

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients
3.1. Substances
Chemical characterization

N,N-Dimethylformamide

 Sum formula: C₃H₇NO

Molecular weight: 73,10 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	GHS Classification	
68-12-2	N,N-dimethylformamide; dimethyl formamide	<= 100 %
	200-679-5	01-2119475605-32-XXXX
	Flam. Liq. 3, Repr. 1B, Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H226 H360D H332 H312 H319	

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
68-12-2	200-679-5	N,N-dimethylformamide; dimethyl formamide	<= 100 % %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 1500 mg/kg; oral: LD50 = 3010 mg/kg	

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

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately. Remove casualty to fresh air and keep warm and at rest.

In case of irregular breathing or respiratory arrest provide artificial respiration.

In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary. After contact with skin, wash immediately with plenty of water and soap.

Remove contaminated, saturated clothing immediately.

In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Medical treatment necessary. Rinse mouth thoroughly with water.

Induce vomiting when the affected person is not unconscious.

Never give anything by mouth to an unconscious person or a person with cramps.

In all cases of doubt, or when symptoms persist, seek medical advice.

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

Refer to chapter 11.

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

Treat symptomatically. Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO₂), Foam, Extinguishing powder. Water spray. alcohol resistant foam.

Dry extinguishing powder. Carbon dioxide (CO₂). Sand.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air. Thermal decomposition can lead to the escape of irritating gases and vapours.

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrogen oxides (NO_x).

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5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.
Use water spray jet to protect personnel and to cool endangered containers.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Usual measures for fire prevention.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Provide adequate ventilation. Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid contact with skin, eyes and clothes.
Wear personal protection equipment.
In case of fire: Evacuate area.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion Do not allow to enter into soil/subsoil.
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation.
Clear contaminated areas thoroughly.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13 Treat the recovered material as prescribed in the section on waste disposal.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Keep away from sources of ignition - No smoking.
In use may form flammable/explosive vapour-air mixture.
Provide adequate ventilation.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air. Usual measures for fire prevention.
Do not spray on naked flames or any incandescent material.
Take precautionary measures against static discharges.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid contact with skin, eyes and clothes.
Provide adequate ventilation.

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When using do not eat, drink or smoke.
Wash hands before breaks and after work.
Protective clothing !!

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed in a cool, well-ventilated place.
Handle and store contents under inert gas. Protect from moisture. Protect from direct sunlight. Containers which are opened carefully and kept upright to prevent leakage.
storage temperature: at room temperature

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limit values**

CAS No	Name of agent	ppm	mg/m ³	fib/cm ³	Category	Origin
68-12-2	N,N-Dimethylformamide	5	15		TWA (8 h)	
		10	30		STEL (15 min)	

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DNEL/DMEL values

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
68-12-2	N,N-dimethylformamide; dimethyl formamide		
Worker DNEL, long-term	inhalation	systemic	15 mg/m ³
Worker DNEL, acute	inhalation	systemic	30 mg/m ³
Worker DNEL, long-term	inhalation	local	15 mg/m ³
Worker DNEL, acute	inhalation	local	30 mg/m ³
Worker DNEL, long-term	dermal	systemic	3,31 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	26,3 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	15 mg/m ³
Consumer DNEL, acute	inhalation	systemic	30 mg/m ³
Consumer DNEL, long-term	inhalation	local	15 mg/m ³
Consumer DNEL, acute	inhalation	local	30 mg/m ³
Consumer DNEL, long-term	dermal	systemic	1,98 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	15,8 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	1,98 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	5,94 mg/kg bw/day

PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
68-12-2	N,N-dimethylformamide; dimethyl formamide	
Freshwater	30 mg/l	
Freshwater (intermittent releases)	30 mg/l	
Marine water	3 mg/l	
Freshwater sediment	115,18 mg/kg	
Marine sediment	11,52 mg/kg	
Micro-organisms in sewage treatment plants (STP)	123 mg/l	
Soil	56,97 mg/kg	

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Individual protection measures, such as personal protective equipment

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Eye/face protection

Suitable eye protection: goggles. Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable gloves.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing. Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Environmental exposure controls

Do not allow to enter into surface water or drains.

Avoid release to the environment.

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

Physical state:	liquid
Colour:	colourless
Odour:	Amines; Odour threshold: 0,329 ppm

Test method**Changes in the physical state**

Melting point/freezing point:	-61 °C
Boiling point or initial boiling point and boiling range:	153 °C
Pour point:	No data available
Flash point:	58 °C

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

Not classified as explosive.

Lower explosion limits:	2,2 vol. %
Upper explosion limits:	16 vol. %
Auto-ignition temperature:	440 °C

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature: not determined

pH-Value (at 20 °C): 7 200 g/l

Viscosity / dynamic:
(at 20 °C) 0,802 mPa·s

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Water solubility:	completely miscible
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	log Pow: -1,01
Vapour pressure: (at 20 °C)	3,60 hPa
Vapour pressure: (at 25 °C)	5,16 hPa
Density:	0,95 g/cm ³
Relative vapour density:	2,52 (Air = 1)

9.2. Other information**Information with regard to physical hazard classes**

Sustaining combustion:	Sustaining combustion
Oxidizing properties No data available	

Other safety characteristics

Solid content:	not determined
Evaporation rate:	not determined

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

Flammable. No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Protect from moisture.

Keep away from heat.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Protect from direct sunlight.

10.5. Incompatible materials

Oxidizing agents, strong. Alkali (lye), concentrated

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrogen oxides (NO_x).**Further information**

In case of fire: See chapter 5.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No data available

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Acute toxicity

Harmful in contact with skin.

Harmful if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68-12-2	N,N-dimethylformamide; dimethyl formamide				
	oral	LD50 3010 mg/kg	Rat	also cited in OECD SIDS Dimethylformamid	BASF internal method
	dermal	LD50 1500 mg/kg	Rabbit		
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

skin contact. - Practical experience/human evidence

Mild skin irritation

Serious eye damage/eye irritation:

Eye contact - Rabbit

Result mild eye irritation

Sensitising effects

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

Respiratory or skin sensitisation - Guinea-pig.

Result: negative

Respiratory or skin sensitisation - Mouse.

Result: negative

Methode: OECD 406

Carcinogenic/mutagenic/toxic effects for reproduction

May damage the unborn child. (N,N-dimethylformamide; dimethyl formamide)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

Germ cell mutagenicity:

Ames test negative.

Salmonella typhimurium

Result: negative

OECD 471 (Ames test)

(ECHA)

In vitro mutagenicity:

Mouse - male - Medulla ossium

Result: negative

(ECHA)

IARC: 2A - This product is a constituent or incorporates one that, by virtue of its IARC, OSHA, ACGIH, NTP or EPA classification is likely to be carcinogenic. Possible human carcinogen (N,N-Dimethylformamide)

Developmental toxicity/teratogenicity :

May cause harm to the unborn child.

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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.

Specific effects in experiment on an animal

Repeated dose toxicity:: Rat - male + female - oral - 28 d: NOAEL: 238 mg/kg - LOAEL: 475 mg/kg - OECD 407 - Subacute oral toxicity

Additional information on tests

Special hazards arising from the substance or mixture. Classification according to Regulation (EC) No 1272/2008 [CLP]: health hazard properties. Repeated dose toxicity:

Rat, male/ female

oral

28 d

NOAEL: 238 mg/kg

LOAEL: 475 mg/kg

OECD 407

Subacute oral toxicity

Practical experience

No data available

11.2. Information on other hazards**Other information**

After absorption:

Headache. Dizziness. Dizziness

Possible effects: liver damage, kidney damage

Further information

RTECS: LQ2100000

Caution! To the best of our knowledge the toxicological properties of this material have not been thoroughly investigated.

Special precautions for user

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

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
68-12-2	N,N-dimethylformamide; dimethyl formamide					
	Acute fish toxicity	LC50 mg/l	7100	96 h	Lepomis macrochirus	Bull. Environ. Contam. Toxicol. 37, 615- other: US EPA guideline 660/3-75-009
	Acute algae toxicity	ErC50 mg/l	> 1000	72 h	Desmodesmus subspicatus	Study report (1988) other: DIN 38412, part 9, "Determination"
	Acute crustacea toxicity	EC50 mg/l	13100	48 h	Daphnia magna	Other company data (2008) OECD Guideline 202
	Algae toxicity	NOEC	940 mg/l	14 d	Pseudokirchneriella subcapitata	Bull. Environ. Contam. Toxicol. 31, 98-1 other: EPA-600/9-78-018
	Crustacea toxicity	NOEC mg/l	1500	21 d	Daphnia magna	ASTM Spec. Tech. Publ. 854, 87-103. (198) Semi-Static toxicity test

12.2. Persistence and degradability

Biological degradation:
 100 %; 21 d; aerob
 OECD 301E/ EEC 92/69/V, C.4-B
 Readily biodegradable (according to OECD criteria).

Biochemical oxygen demand
 900 mg/g (5 d)

Theoretical oxygen demand (ThOD):
 1.863 mg/g

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Bioconcentration factor (BCF): 0,3 - 1,2
 Cyprinus carpio (Common Carp); 56 d
 OECD 305C
 Does not significantly accumulate in organisms.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68-12-2	N,N-dimethylformamide; dimethyl formamide	-1,01

BCF

CAS No	Chemical name	BCF	Species	Source
68-12-2	N,N-dimethylformamide; dimethyl formamide	0,3 - 1,2	Cyprinus carpio	Japan Chemical Indus

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.7. Other adverse effects

Chemical stability in Water: ca. 50 d
 Solvent: Water

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Reaction with Hydroxylradikalen (calculated.) (Lit.)

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Discharge into the environment must be avoided.

Warning - substance not yet tested completely.

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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 2265
14.2. UN proper shipping name:	N,N-DIMETHYLFORMAMIDE
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Classification code:	F1
Limited quantity:	5 L
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Other applicable information (land transport)

E2
E0
E1

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2265
14.2. UN proper shipping name:	N,N-DIMETHYLFORMAMIDE
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Classification code:	F1
Limited quantity:	5 L

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Other applicable information (inland waterways transport)E2
E0
E1**Marine transport (IMDG)**

14.1. UN number or ID number: UN 2265
14.2. UN proper shipping name: N,N-DIMETHYLFORMAMIDE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Special Provisions: -
Limited quantity: 5 L
EmS: F-E, S-D

Other applicable information (marine transport)E2
E0
E1**Air transport (ICAO-TI/IATA-DGR)**

14.1. UN number or ID number: UN 2265
14.2. UN proper shipping name: N,N-DIMETHYLFORMAMIDE
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Limited quantity Passenger: 10 L
IATA-packing instructions - Passenger: 355
IATA-max. quantity - Passenger: 60 L
IATA-packing instructions - Cargo: 366
IATA-max. quantity - Cargo: 220 L

Other applicable information (air transport)E2
: Y340
: Forbidden
E1
: Y344**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Combustible liquid.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**EU regulatory information**

Authorisations (REACH, annex XIV):

This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 30, Entry 40

2010/75/EU (VOC):	100 % (950 g/l)
2004/42/EC (VOC):	100 % (950 g/l)
Information according to 2012/18/EU (SEVESO III):	H2 ACUTE TOXIC
Additional information:	P5c

Additional information

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National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

Additional information

for professional use only

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H312	Harmful in contact with skin.
H312+H332	Harmful in contact with skin or if inhaled.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360D	May damage the unborn child.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. Warning - substance not yet tested completely.

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The product is intended for research, analysis and scientific education.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.