



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**DMF**

Revision date: 26.06.2023

Product code: SOL-004

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**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**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
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.  
Restricted to professional users.

**Labelling of packages where the contents do not exceed 125 ml****Signal word:** Danger**Pictograms:****Hazard statements**

H360D

**Precautionary statements**

P280-P308+P313

**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: C<sub>3</sub>H<sub>7</sub>NO

Molecular weight: 73,10 g/mol

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
68-12-2	N,N-dimethylformamide; dimethyl formamide			<= 100 %
	200-679-5	616-001-00-X	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.

**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: ATE = 1100 mg/kg; oral: LD50 = 3010 mg/kg		

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

**After inhalation**

Provide fresh air. Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Consult a doctor.

**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.

Consult a doctor.

**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**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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.

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

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**Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder. Water spray. alcohol resistant foam. Dry extinguishing powder. 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 (CO<sub>2</sub>). Carbon monoxide (CO). Nitrogen oxides (NO<sub>x</sub>).

Formaldehyde

**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**

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. Avoid dust formation. Do not breathe dust. 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.

**For non-emergency personnel**

Cover drains.

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

**For emergency responders**

Cover drains.

Stop and contain spill/release if it can be done safely.

**6.2. Environmental precautions**

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

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****For containment**

Cover drains.

Stop and contain spill/release if it can be done safely.

**For cleaning up**

Universal binder/ Binder: Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal.

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.

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**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. Avoid dust formation. Do not breathe dust. 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, drink, smoke, sniff.

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.

**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 <sup>3</sup>	fib/cm <sup>3</sup>	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	6 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	30 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	15 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	30 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	1,1 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	26,3 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,1 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	systemic	30 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	15 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	local	30 mg/m <sup>3</sup>
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	0,16 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	111 mg/kg	
Marine sediment	11,1 mg/kg	
Micro-organisms in sewage treatment plants (STP)	44 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 dust. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

**Individual protection measures, such as personal protective equipment**
**Eye/face protection**

Wear eye/face protection.

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and

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approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**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.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Skin protection**

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.

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Thermal hazards**

No data available

**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	
Odour threshold:	not determined	
		<b>Test method</b>
Melting point/freezing point:	-61 °C	
Boiling point or initial boiling point and boiling range:	153 °C	
Flammability:	not determined	
Lower explosion limits:	2,2 vol. %	
Upper explosion limits:	16 vol. %	
Flash point:	58 °C	
Auto-ignition temperature:	440 °C	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	7	200 g/l
Viscosity / kinematic:	not determined	
Water solubility:	completely miscible	
Solubility in other solvents	not determined	
Dissolution rate:	not determined	

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Partition coefficient n-octanol/water:	log Pow: -0,85
Dispersion stability:	No data available
Vapour pressure: (at 20 °C)	3,60 hPa
Vapour pressure: (at 25 °C)	5,16 hPa
Density:	0,95 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	not applicable (liquid)
Relative vapour density:	2,52 (Air = 1)
Particle characteristics:	not applicable (liquid)

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

## Explosive properties

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

## Sustaining combustion:

Sustaining combustion

## Oxidizing properties

No data available

**Other safety characteristics**

Evaporation rate: not determined

Solvent content: 100,00 %

Solid content: not applicable

Pour point: No data available

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

Flow time: No data available

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

Flammable.

In use, may form flammable/explosive vapour-air mixture.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Violent reaction with:

Alkali metals.

Halogenes

Halogenic compounds.

Reducing agent

Triethylaluminium

Nitrate

Halocarbon.

Isocyanate

Sodium

Sodium borohydride.

Oxidising agent

Phosphorus oxides.

Tin

Oxidizing agents, strong.

Rubber.

Copper alloys



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Explosion hazard with:  
Azide  
Bromine  
Chlorine  
Chrom(VI)-oxid  
Potassium chlorate Halocarbon.

**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.  
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 (CO<sub>2</sub>). Carbon monoxide (CO). Nitrogen oxides (NO<sub>x</sub>).  
Formaldehyde

**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

**Acute toxicity**

Harmful in contact with skin.  
Harmful if inhaled.  
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2).

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	OECD Guideline 401
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

**Irritation and corrosivity**

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Causes serious eye irritation.  
Skin corrosion/irritation: Based on available data, the classification criteria are not met.  
Skin corrosion/irritation:  
Skin - rabbit.  
Result: No skin irritation - 20 h  
(ECHA)

Serious eye damage/eye irritation:  
Eye contact - Rabbit  
Result: Irritating to eyes.  
OECD 405  
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2).

**Sensitising effects**

Based on available data, the classification criteria are not met.  
Respiratory or skin sensitisation  
Local lymph node assay (LLNA) - 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  
Salmonella typhimurium  
Result: negative  
OECD 471 (Ames test)  
(ECHA)

Developmental toxicity/teratogenicity :  
May cause harm to the unborn child.

**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**

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**

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**Endocrine disrupting properties**

No data available

**Other information**

After absorption:

Headache. Dizziness. Dizziness

Possible effects: liver damage, kidney damage

**Further information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Special hazards arising from the substance or mixture!

RTECS: LQ2100000

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

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Special precautions for user

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

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

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	REACH Registration Dossier other: US EPA guideline 660/3-75-009
	Acute algae toxicity	ErC50 mg/l	> 1000	72 h	Desmodesmus subspicatus	REACH Registration Dossier other: DIN 38412, part 9, "Determination"
	Acute crustacea toxicity	EC50 mg/l	13100	48 h	Daphnia magna	REACH Registration Dossier OECD Guideline 202
	Fish toxicity	NOEC mg/l	> 102	21 d	Oryzias latipes	REACH Registration Dossier OECD Guideline 204
	Algae toxicity	NOEC	940 mg/l	14 d	Raphidocelis subcapitata	Bull. Environ. Contam. Toxicol. 31, 98-1 other: EPA-600/9-78-01 8
	Crustacea toxicity	NOEC mg/l	1500	21 d	Daphnia magna	REACH Registration Dossier 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)

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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	-0,85

**BCF**

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

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

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

Hazardous waste according to Directive 2008/98/EC (waste framework directive). 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)**

<b>14.1. UN number or ID number:</b>	UN 2265
<b>14.2. UN proper shipping name:</b>	N,N-DIMETHYL-FORMAMIDE
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	III

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Hazard label: 3


 Classification code: F1  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 30  
 Tunnel restriction code: D/E

**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  
 Excepted quantity: 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  
 Excepted quantity: E1  
 EmS: F-E, S-D

**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  
 Passenger LQ: Y344  
 Excepted quantity: E1  
 IATA-packing instructions - Passenger: 355  
 IATA-max. quantity - Passenger: 60 L  
 IATA-packing instructions - Cargo: 366  
 IATA-max. quantity - Cargo: 220 L

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**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****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 40, Entry 72

2010/75/EU (VOC): 100 % (950 g/l)

2004/42/EC (VOC): 100 % (950 g/l)

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Use restriction according to REACH annex XVII, no.: 3, 30, 40, 72, 76

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

**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**

Reserved for industrial and professional use.

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,4,5,6,7,8,9,10,11,12,15,16.

**Abbreviations and acronyms**

ADR: Accord relatif au transport international des marchandises dangereuses par route (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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**DMF**

Revision date: 26.06.2023

Product code: SOL-004

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ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
CAS: Chemical Abstracts Service  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

**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.