



SAFETY DATA SHEET

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

Issue Date 23-Mar-2005

Revision Date 06-Dec-2023

Version 4.4

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) 193432
Product Name Amino Acid Reagent for Phosphate and Silica
Unique Formula Identifier (UFI) WWY9-JDJM-Y00M-WFF1

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

Recommended Use Water Analysis. Silica determination. Phosphate determination.
Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Supplier

HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

1.4. Emergency telephone number

UK: Chemtrec: +44 20 3807 3798
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 1 - (H318)
Respiratory sensitisation	Category 1 - (H334)
Reproductive toxicity	Category 1B - (H360D)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Regulation (EC) No 1272/2008

Contains N,N-Dimethylformamide, Sodium metabisulfite



Signal word

Danger

Hazard statements

H318 - Causes serious eye damage

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H360D - May damage the unborn child

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P201 - Obtain special instructions before use

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

Special labelling of certain mixtures

Restricted to professional users

2.3. Other hazards

May be harmful if swallowed. Causes mild skin irritation. Harmful to aquatic life.

PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

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	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
N,N-Dimethylformamide	68-12-2 200-679-5 616-001-00-X	20 - 30%	Acute Tox. 4 - H312 Eye Irrit. 2 - H319 Acute Tox. 4 - H332 Repr. 1B - H360D		-	-
Sodium metabisulfite	7681-57-4 231-673-0 016-063-00-2	3 - 7%	Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Resp. Sens. 1 - H334 STOT SE 3 - H335 Aquatic Chronic 3 - H412		-	-

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

Acute Toxicity Estimate

No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
N,N-Dimethylformamide 68-12-2	2800 mg/kg	1100 mg/kg	> 5.9 mg/L	None reported	None reported
Sodium metabisulfite 7681-57-4	500 mg/kg	> 2000 mg/kg	> 5.5 mg/L	None reported	None reported

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
N,N-Dimethylformamide	68-12-2	X

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical attention.

Eye contact	Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. May produce an allergic reaction. Get immediate medical attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.

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

Symptoms	Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	May cause sensitisation in susceptible persons. 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	Product is or contains a sensitiser. May cause sensitisation by inhalation.
Hazardous combustion products	Sulphur oxides. Dimethylamine. nitrogen oxides. carbon monoxide, carbon dioxide.

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.
Additional information	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from
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and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

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 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Remove contaminated clothing and shoes.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Accessible only for authorized persons.

7.3. Specific end use(s)

Specific use(s) Analytical reagent.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom	Ireland
N,N-Dimethylformamide 68-12-2	TWA: 15 mg/m ³ TWA: 5 ppm * STEL: 10 ppm STEL: 30 mg/m ³	TWA: 5 ppm TWA: 15 mg/m ³ STEL: 10 ppm STEL: 30 mg/m ³ Sk*	TWA: 5 ppm TWA: 15 mg/m ³ STEL: 10 ppm STEL: 30 mg/m ³ Sk*

Sodium metabisulfite 7681-57-4	-	TWA: 5 mg/m ³ STEL: 15 mg/m ³	TWA: 5 mg/m ³ STEL: 15 mg/m ³
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Biological occupational exposure limits

Chemical name	European Union	United Kingdom	Ireland
N,N-Dimethylformamide 68-12-2	-	-	15 mg/L (urine - N-Methylformamide post shift)

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
N,N-Dimethylformamide 68-12-2	-	3.31 mg/kg bw/day [4] [6] 26.3 mg/kg bw/day [4] [7] 446 µg/cm ² [5] [6] 5900 µg/cm ² [5] [7] 1.1 mg/kg/d	15 mg/m ³ [4] [6] 30 mg/m ³ [4] [7] 15 mg/m ³ [5] [6] 30 mg/m ³ [5] [7] 6 mg/m ³
Sodium metabisulfite 7681-57-4	-	-	225 mg/m ³ [4] [6]
Sodium sulfite 7757-83-7	-	-	298 mg/m ³ [4] [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
N,N-Dimethylformamide 68-12-2	30 mg/L	30 mg/L	3 mg/L	-	-
Sodium metabisulfite 7681-57-4	1 mg/L	-	0.1 mg/L	-	-
Sodium sulfite 7757-83-7	1.33 mg/L	-	0.13 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
N,N-Dimethylformamide 68-12-2	115.18 mg/kg sediment dw	11.52 mg/kg sediment dw	123 mg/L	56.97 mg/kg soil dw	-
Sodium metabisulfite 7681-57-4	-	-	75.4 mg/L	-	-
Sodium sulfite 7757-83-7	-	-	99.9 mg/L	-	-

8.2. Exposure controls

Engineering controls Technical measures and appropriate working operations should be given priority over the

use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Personal protective equipment
Eye/face protection

Tight sealing safety goggles.

Hand protection

Wear suitable gloves.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes
Short term	Wear protective nitrile rubber gloves	0,20 mm	>30 minutes

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

Ensure adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid

Colour light brown/yellow

Odour Amine

Odour threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	5.8	
Melting point / freezing point	~ -21 °C / -5.8 °F	
Initial boiling point and boiling range	102 °C / 215.6 °F	
Evaporation rate	0.59 (water = 1)	
Vapour pressure	21.602 mm Hg / 2.88 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition	Not applicable	

Coefficient**Autoignition temperature** No data available**Decomposition temperature** No data available**Dynamic viscosity** No data available**Kinematic viscosity** No data available**Relative density** 1.065 g/mL @ 20 °C**Solubility(ies)****Water solubility**

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

Metal Corrosivity**Steel Corrosion Rate** No data available**Aluminum Corrosion Rate** No data available**Explosive properties****Upper explosion limit** No data available**Lower explosion limit** No data available**Flammable properties****Flash point** > 100 °C / 212 °F**Method** CC (closed cup)**Flammability****Upper flammability limit:** No data available**Lower flammability limit** No data available**Oxidising properties**

No data available.

Bulk density

No data available

9.2. Other information

No information available.

Section 10: STABILITY AND REACTIVITY**10.1. Reactivity****Reactivity** No information available.**10.2. Chemical stability**

Stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous Decomposition Products nitrogen oxides. Carbon dioxide. Carbon monoxide. Sulphur oxides.

Section 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

Based on available data, the classification criteria are not met

Mixture Test data reported below.

Oral Exposure Route:

Key literature references and sources for data
Outside testing

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
N,N-Dimethylformamide	Rat LD ₅₀	2800 mg/kg	None reported	None reported	IUCLID
Sodium metabisulfite	Rat LD ₅₀	500 mg/kg	None reported	None reported	No information available
Sodium sulfite	Rat LD ₅₀	3560 mg/kg	None reported	None reported	GESTIS

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
N,N-Dimethylformamide	Rat LD ₅₀	1100 mg/kg	None reported	None reported	IUCLID
Sodium metabisulfite	Rat LD ₅₀	> 2000 mg/kg	None reported	None reported	LOLI
Sodium sulfite	Rat LD ₅₀	2000 mg/kg	None reported	None reported	EPA

Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
N,N-Dimethylformamide	Rat LC ₅₀	> 5.9 mg/L	4 hours	None reported	IUCLID
Sodium metabisulfite	Rat LC ₅₀	> 5.5 mg/L	4 hours	None reported	RTECS
Sodium sulfite	Rat LC ₅₀	5.5 mg/L	4 hours	None reported	ECHA

Inhalation (Vapor) Exposure Route:

Acute Toxicity Estimate (ATE) Not applicable

ATEmix (dermal)	4,686.80 mg/kg
ATEmix (inhalation-dust/mist)	6.39 mg/l
ATEmix (inhalation-vapour)	46.90 mg/l

Unknown acute toxicity

0.01 % of the mixture consists of ingredient(s) of unknown toxicity.

Skin corrosion/irritation

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

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
N,N-Dimethylformamide	Draize Test	Human	1000 mg	None reported	Mild skin irritant	RTECS
Sodium sulfite	Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
N,N-Dimethylformamide	Rinse Test	Rabbit	100 mg	None reported	Corrosive to eyes	RTECS
Sodium metabisulfite	Draize Test	Rabbit	107 mg	None reported	Corrosive to eyes	RTECS
Sodium sulfite	Draize Test	Rabbit	162 mg	None reported	Mild eye irritant	ECHA

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Mixture No data available.

Substance Test data reported below.

Skin Sensitization Exposure Route:

Chemical name	Test method	Species	Results	Key literature references and sources for data
N,N-Dimethylformamide	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	IUCLID

Respiratory Sensitization Exposure Route:

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium metabisulfite	Based on human experience	Human	Confirmed to be a respiratory sensitizer	GESTIS
Sodium sulfite	Based on human experience	Human	Confirmed to be a respiratory sensitizer	OECD 429: Skin Sensitization: Local Lymph Node Assay

STOT - single exposure

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

Mixture No data available.

Substance No data available.

STOT - repeated exposure

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

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium metabisulfite	Rat TD _{Lo}	75 mg/kg	15 days	Biochemical Enzyme inhibition, induction, or change in blood or tissue levels (phosphatases and dehydrogenases) Kidney, Ureter, or Bladder Other changes in urine composition	RTECS

Germ cell mutagenicity

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

Mixture invitro Data No data available.

Substance invitro Data Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
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N,N-Dimethylformamide	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative	RTECS
Sodium metabisulfite	Cytogenetic analysis	Hamster ovary	0.18 mg/L	None reported	Positive test result for mutagenicity	RTECS
Sodium sulfite	Cytogenetic analysis	Mouse sperm cells	25 mg/L	None reported	Positive test result for mutagenicity	RTECS

Mixture in vivo **Data** No data available.

Substance in vivo **Data** No data available.

Carcinogenicity

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

Mixture No data available.

Substance No data available.

Reproductive toxicity

Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
N,N-Dimethylformamide	Repr. 1B

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium metabisulfite	Rat TD _{Lo}	20000 mg/kg	None reported	Effects on Newborn Stillbirth	RTECS

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
N,N-Dimethylformamide	Mouse TD _{Lo}	50 mg/L	6 hours	Paternal Effects Spermatogenesis (including genetic material, sperm morphology, motility, and count)	RTECS

Aspiration hazard

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

11.2. Information on other hazards

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties

11.2.2. Other information

Other adverse effects No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0.01 % of components with unknown hazards to the aquatic environment.

Mixture

Acute aquatic toxicity: No data available.

Aquatic Chronic Toxicity: No data available.

Substance

Acute aquatic toxicity: Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
N,N-Dimethylformamide	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	7100 mg/L	PEEN
Sodium metabisulfite	96 hours	<i>Salmo gairdneri</i>	LC ₅₀	15 mg/L	IUCLID
Sodium sulfite	96 hours	<i>Leuciscus idus</i>	LC ₅₀	170 mg/L	OECD 429: Skin Sensitization: Local Lymph Node Assay

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
N,N-Dimethylformamide	48 Hours	<i>Daphnia magna</i>	EC ₅₀	7500 mg/L	PEEN
Sodium sulfite	48 Hours	<i>Daphnia magna</i>	EC ₅₀	18 mg/L	OECD 429: Skin Sensitization: Local Lymph Node Assay

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
N,N-Dimethylformamide	96 hours	<i>Scenedesmus subspicatus</i>	EC ₅₀	> 500 mg/L	PEEN
Sodium metabisulfite	96 hours	<i>Scenedesmus subspicatus</i>	EC ₅₀	40 mg/L	IUCLID
Sodium sulfite	None reported	<i>Chlamydomonas reinhardtii</i>	EC ₅₀	63 mg/L	OECD 429: Skin Sensitization: Local Lymph Node Assay

Aquatic Chronic Toxicity: No data available.

12.2. Persistence and degradability

Mixture No data available.

12.3. Bioaccumulative potential

Mixture: No data available.

Partition coefficient Not applicable

12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient Not applicable

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
N,N-Dimethylformamide	The substance is not PBT / vPvB
Sodium metabisulfite	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors
Endocrine Disruptor Information:

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
N,N-Dimethylformamide	Group III Chemical	-	-

12.7. Other adverse effects

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on Disposal

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Our local agencies will accept used cuvettes to ensure their proper disposal.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Contaminated packaging Dispose of contents/containers in accordance with local regulations.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

ADR

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 regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IATA

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 regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

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 regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

Additional information

Section 15: REGULATORY INFORMATION

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

National regulations

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

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Authorisations 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 authorisation per REACH Annex XIV
N,N-Dimethylformamide - 68-12-2	72.	

	30. 75. 76.	
Sodium metabisulfite - 7681-57-4	75.	

Persistent Organic Pollutants Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

- Non-controlled

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

Not applicable

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
N,N-Dimethylformamide 68-12-2	RG 84 RG 5, RG 14, RG 15, RG 15bis, RG 20bis	-
Sodium metabisulfite 7681-57-4	RG 66 RG 15bis, RG 74	-

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDL	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment**Chemical Safety Report**

Chemical safety assessments for substances in this mixture were not carried out.

Section 16: OTHER INFORMATION

Issue Date 23-Mar-2005

Revision Date 06-Dec-2023

Revision Note updated SDS sections:
8

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend**

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation

STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity — repeated exposure
STOT SE	Specific target organ toxicity — single exposure
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AWSV	Administrative regulation of water polluting substances, Germany

Key literature references and sources for data

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method

Full text of H-Statements referred to under section 3

EUH031 - Contact with acids liberates toxic gas

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H360D - May damage the unborn child

Training Advice

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

Restrictions on use

For Laboratory Use Only.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**End of Safety Data Sheet**