SAFETY DATA SHEET

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

Issue Date 17-Mar-2005 **Revision Date** 26-Jul-2024 **Version** 7.1

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

1.1. Product identifier

Product Code(s) 2106046

Product Name PhosVer® 3 Phosphate Reagent

Unique Formula Identifier (UFI) GAA9-2DWC-F00U-5HKJ

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

Recommended Use Water Analysis. Phosphate determination.

Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Supplier
HACH LANGE GmbH
Willstätterstr. 11
D-40549 Düsseldorf
Tel: +49 (0)211 5288-383
sds@hach.com

Responsible country contact:

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

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity - Inhalation (Dusts/Mists)	Category 3 - (H331)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Contains Potassium pyrosulfate



Signal word
Danger

Hazard statements
H315 - Causes skin irritation
H318 - Causes serious eye damage
H331 - Toxic if inhaled

Precautionary statements
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash it before reuse
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/physician

2.3. Other hazards
No information available.

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)
Potassium pyrosulfate	7790-62-7 232-216-8 -	80 - 90%	Skin Corr. 1A - H314 Eye Dam. 1 - H318 Acute Tox. 3 - H331		-	-
Sodium molybdate	7631-95-0 231-551-7 -	1 - 5%	Not classified		-	-
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	28300-74-5 - 051-003-00-9	<1%	Acute Tox. 3 - H301 Acute Tox. 4 - H302 Acute Tox. 4 - H332 Aquatic Chronic 2 - H411	::	-	-

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
Potassium pyrosulfate 7790-62-7	None reported	None reported	0.375 mg/L	None reported	None reported
Sodium molybdate 7631-95-0	4000 mg/kg	> 2000 mg/kg	None reported	None reported	None reported

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. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen.

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. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor or poison control centre immediately.
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. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. 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. Coughing and/ or wheezing. Difficulty in breathing.

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

Note to doctors	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	Thermal decomposition can lead to release of irritating and toxic gases and vapours.
Hazardous combustion products	Sulphur oxides. carbon monoxide, carbon dioxide. sodium monoxide. Potassium oxides.

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. Avoid generation of dust. Do not breathe dust. Evacuate personnel to safe areas. Keep people away from 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 Avoid creating dust. 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. Take off contaminated clothing and wash it before reuse. Do not breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation.

General hygiene considerations Avoid creating dust. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Do not breathe dust. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. 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
Sodium molybdate 7631-95-0	-	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 10 mg/m³ TWA: 0.5 mg/m³ STEL: 30 mg/m³ STEL: 1.5 mg/m³

Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer 28300-74-5	-	TWA: 0.5 mg/m³ STEL: 1.5 mg/m³	TWA: 0.5 mg/m³ STEL: 1.5 mg/m³

Biological occupational exposure limits

Information on monitoring procedures Refer to European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) or equivalent national standard(s).

Derived No Effect Level (DNEL) No information available

Notes

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

Predicted No Effect Concentration (PNEC) No information available.

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. Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious 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. Long sleeved clothing.

Respiratory protection Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

General hygiene considerations Avoid creating dust. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Do not breathe dust. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. 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 Solid

Colour white **Odour** Odourless

Odour threshold Not applicable

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	1.5	5% @ 20°C
Melting point / freezing point	105 °C / 221 °F	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapour pressure	Not applicable	
Relative vapor density	No data available	
Partition coefficient	log K_{ow} ~ -0.42	
Soil Organic Carbon-Water Partition Coefficient	log K_{oc} ~ -0.23	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	
Relative density	2.22 g/cm³	@ 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
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

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	Not applicable

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 Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Excessive heat.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating and toxic gases and vapours.

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 No data available.

Substance No data available.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium molybdate	Rat LD_{50}	4000 mg/kg	None reported	None reported	RTECS
Tetrasodium EDTA, dihydrate	Rat LD_{50}	2700 mg/kg	None reported	None reported	IUCLID
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	Rat LD_{50}	115 mg/kg	None reported	None reported	Vendor SDS

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium molybdate	Rat LD_{50}	> 2000 mg/kg	None reported	None reported	Vendor SDS

Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium pyrosulfate	Rat LC_{50}	0.375 mg/L	4 hours	Upper Respiratory Tract lesions	ECHA
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	None reported	Estimated	None reported	None reported	No information available

Acute Toxicity Estimate (ATE) Not applicable

	mg/kg
ATEmix (inhalation-dust/mist)	0.619 mg/l

Unknown acute toxicity
0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Skin corrosion/irritation
Classification based on data available for ingredients. Causes skin irritation.

Mixture Test data reported below.

Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
United States Department of Transportation (DOT) Skin Corrosion Test	Rabbit	None reported	None reported	Not corrosive to skin	Internal Data Outside testing

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium pyrosulfate	None reported	None reported	None reported	None reported	Corrosive to skin	Vendor SDS
Sodium molybdate	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
Potassium pyrosulfate	None reported	None reported	None reported	None reported	Corrosive to eyes	Vendor SDS
Sodium molybdate	Patch test	None reported	200 mg	None reported	Not corrosive or irritating to eyes	ECHA
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	None reported	Rabbit	100 mg	24 hours	Eye irritant	No information available

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

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
Sodium molybdate	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	Vendor SDS

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 No data available.

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
L-Ascorbic acid	DNA damage	Human fibroblast	0.2 mmol/L	None reported	Positive test result for mutagenicity	RTECS
Sodium molybdate	Phage inhibition capacity	Escherichia coli	16 mmol/L	None reported	Positive test result for mutagenicity	RTECS

Mixture invivo **Data** No data available.

Substance invivo **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
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
L-Ascorbic acid	Guinea pig TD_{Lo}	19500 mg/kg	28 days	None reported	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 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.

Unknown aquatic toxicity Contains 0 % 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
Potassium pyrosulfate	96 hours	*Oncorhynchus mykiss*	LC_{50}	420 mg/L	ERMA
L-Ascorbic acid	96 hours	None reported	LC_{50}	44200 mg/L	ECOSARS
Sodium molybdate	96 hours	*Oncorhynchus mykiss*	LC_{50}	800 mg/L	GESTIS
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer	96 hours	None reported	LC_{50}	12.5 mg/L	Vendor SDS

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium pyrosulfate	48 Hours	*Daphnia magna*	EC_{50}	140 mg/L	ERMA
L-Ascorbic acid	48 Hours	None reported	LC_{50}	17500 mg/L	ECOSARS

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
L-Ascorbic acid	96 hours	None reported	EC_{50}	29675 mg/L	ECOSARS

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 log K_{ow} ~ -0.42

12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient log K_{oc} ~ -0.23

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
Potassium pyrosulfate	PBT assessment does not apply
Sodium molybdate	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

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 (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 (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 3288
14.2 UN proper shipping name TOXIC SOLID, INORGANIC, N.O.S. (Potassium pyrosulfate)
14.3 Transport hazard class(es) 6.1
14.4 Packing Group III
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions 274
Classification code T5
Tunnel restriction code (E)

IATA

14.1 UN number or ID number UN3288
14.2 UN proper shipping name Toxic solid, inorganic, n.o.s. (Potassium pyrosulfate)
14.3 Transport hazard class(es) 6.1
14.4 Packing group III
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions None

IMDG

14.1 UN number or ID number UN3288
14.2 UN proper shipping name TOXIC SOLID, INORGANIC, N.O.S. (POTASSIUM PYROSULFATE)
14.3 Transport hazard class(es) 6.1
14.4 Packing Group III
14.5 Environmental hazards Not applicable
14.6 Special precautions for user
Special Provisions 223, 274
EmS-No F-A, S-A
14.7 Maritime transport in bulk according to IMO instruments No information available

Additional information
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

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

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	Substance subject to authorisation per

	Annex XVII	REACH Annex XIV
Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer - 28300-74-5	Use restricted. See entry 75.	

Persistent Organic Pollutants Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
• H2 - ACUTE TOXIC

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Germany

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

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
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/NDSL - 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 17-Mar-2005

Revision Date 26-Jul-2024

Revision Note	updated SDS sections: 2 7 8 11

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 oral toxicity	Calculation method
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	On basis of test data
Serious eye damage/eye irritation	On basis of test data
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
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 toxicity	Calculation method
Ozone	Calculation method

Full text of H-Statements referred to under section 3
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H411 - Toxic to aquatic life with long lasting effects

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

Prepared By Hach Product Compliance Department

Restrictions on use None

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet