SAFETY DATA SHEET

Revision Date 17-Mar-2025 **Version** 3.6

Section 1: Identification

Product identifier

Product Name ZincoVer® 5 Zinc Reagent Powder Pillows

Safety data sheet number M00048

Other means of identification

Pure substance/mixture Mixture

Molecular weight 1

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Determination of zinc

Uses advised against Consumer use

Manufacturer or supplier details

Manufacturer Address
Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

For further information, please contact

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

Section 2: Hazard identification

Classification of the substance or mixture

Classification

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 3 - (H311)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2A - (H319)
Reproductive toxicity	Category 1B - (H360)
Specific target organ toxicity (single exposure)	Category 1 Category 3 - (H370, H335)
Category 3 Respiratory irritation	
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

Label elements

Signal word
Danger

Hazard statements
H302 - Harmful if swallowed.
H311 - Toxic in contact with skin.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H360 - May damage fertility or the unborn child.
H370 - Causes damage to organs.
H372 - Causes damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents/ container to an approved waste disposal plant.
P271 - Use only outdoors or in a well-ventilated area.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P201 - Obtain special instructions before use.
P308 + P313 - IF exposed or concerned: Get medical advice/attention.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P270 - Do not eat, drink or smoke when using this product.
P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P273 - Avoid release to the environment.
P391 - Collect spillage.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 - Rinse mouth.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Other Hazards Known

Other hazards No information available.

Section 3: Composition/information on ingredients

Substance

Not applicable

Mixture

Chemical Family Mixture.

Chemical nature Mixture of inorganic salts.

Chemical name	CAS No.	Weight-%
Boron potassium oxide (B4K2O7)	1332-77-0	50 - 60%
Boron oxide (B2O3)	1303-86-2	10 - 20%
Potassium cyanide	151-50-8	1 - 5%

Section 4: First-aid measures

Description of necessary first aid measures

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

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. If symptoms persist, call a physician.

Eye contact Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

Skin contact Get immediate medical attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider 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. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms/effects, acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Effects of Exposure May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

Section 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Hazardous combustion products Cyanide compounds. Nitrogen oxides. Potassium oxides. Boron compounds.

Special protective equipment and precautions for fire-fighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid generation of dust. Do not breathe dust.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

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

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 Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

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. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

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. Regular cleaning of equipment, work area

and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

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.

Section 8: Exposure controls/personal protection

Control Parameters

Occupational exposure limits

Chemical name	Singapore	ACGIH TLV
Boron potassium oxide (B4K2O7) 1332-77-0		TWA: 2 mg/m³ inhalable particulate matter STEL: 6 mg/m³ inhalable particulate matter
Boron oxide (B2O3) 1303-86-2	PEL: 10 mg/m³	TWA: 10 mg/m³
Potassium cyanide 151-50-8	STEL: 5 mg/m³	Sk* Ceiling: 5 mg/m³ CN

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering 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 protection

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016. Barrier creams may help to protect the exposed areas of skin.

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

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

ABEK-P3.

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. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance powder **Color** purple
Odor Odorless **Odor threshold** Not applicable

Property	Values	Remarks • Method
Molecular weight	Not applicable	
pH	8.7	5% Solution
Melting point / freezing point	155 °C / 311 °F	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	1.83	
Partition coefficient	log K_{ow} ~ -1.6	
Soil Organic Carbon-Water Partition Coefficient	log K_{oc} ~ 0.07	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

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

Other information

Corrosive to metals

Steel Corrosion Rate Not applicable
Aluminum Corrosion Rate Not applicable

Volatile Organic Compounds (VOC) Content
Not applicable

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Boron potassium oxide (B4K2O7)	1332-77-0	No data available	-
Boron oxide (B2O3)	1303-86-2	No data available	-
Potassium cyanide	151-50-8	Not applicable	-

Explosive properties

Upper explosion limit No data available
Lower explosion limit No data available

Flammable properties

Flash point Not applicable

Flammability Limit in Air
Upper flammability limit: No data available
Lower flammability limit: No data available

Oxidizing properties No data available.

Bulk density Not applicable

Section 10: Stability and reactivity

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Excessive heat.

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

Hazardous Decomposition Products Cyanide. Boron compounds. Nitrogen oxides. Potassium oxide. Contact with acids/acid fumes releases toxic cyanide gas.

Section 11: Toxicological information

Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract. Harmful by inhalation.
Eye contact	Causes serious eye irritation. May cause redness, itching, and pain.
Skin contact	Causes skin irritation. Toxic in contact with skin.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing.

Acute toxicity
Harmful if swallowed
Toxic in contact with skin
Harmful if inhaled
Mixture
Test data reported below.
Oral Exposure Route

Endpoint type	Reported dose	Toxicological effects	Key literature references and sources for data
Rat LD_{50}	383 mg/kg	**Behavioral** Loss of righting reflex Sedation Tonic convulsions **Eye** Ptosis **Gastrointestinal** Enteritis in the large intestine Enteritis in the small intestine **Lungs, Thorax, or Respiration** Congestion of the lungs Respiratory depression Infection of the lungs **Skin and Appendages** Piloerection	Outside testing

Ingredient Acute Toxicity Data
Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Boron potassium oxide ($B_4K_2O_7$) (50 - 60%) CAS#: 1332-77-0	Rat LD_{50}	3500 mg/kg	None reported	None reported	Vendor SDS
Boron oxide (B_2O_3) (10 - 20%) CAS#: 1303-86-2	Rat LD_{50}	3150 mg/kg	None reported	None reported	RTECS
Potassium cyanide (1 - 5%) CAS#: 151-50-8	Rat LD_{50}	5 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
Boron potassium oxide ($B_4K_2O_7$) (50 - 60%) CAS#: 1332-77-0	Rat LD_{50}	> 2000 mg/kg	None reported	None reported	Vendor SDS
Potassium cyanide (1 - 5%) CAS#: 151-50-8	Rabbit LD_{50}	22.3 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 cyanide (1 - 5%) CAS#: 151-50-8	Rat LC_{50}	0.04 mg/L	4 hours	None reported	ERMA

Toxic in contact with skin. Harmful if swallowed. Harmful by inhalation.

Numerical measures of toxicity
No information available
The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (dermal) 743.30 mg/kg
ATEmix (inhalation-dust/mist) 1.67 mg/kg

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
Classification based on data available for ingredients. Causes skin irritation.
Mixture
No data available.
Ingredient Skin Corrosion/Irritation Data
Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Boron potassium oxide ($B_4K_2O_7$) (50 - 60%) CAS#: 1332-77-0	Standard Draize Test	Rabbit	500 mg	4 hours	Skin irritant	ECHA
Boron oxide (B_2O_3) (10 - 20%) CAS#: 1303-86-2	Standard Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	ECHA

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes serious eye irritation.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Boron potassium oxide ($B_4K_2O_7$) (50 - 60%) CAS#: 1332-77-0	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Eye irritant	ECHA
Boron oxide (B_2O_3) (10 - 20%) CAS#: 1303-86-2	Standard Draize Test	Rabbit	100 mg	24 hours	Mild eye irritant	ECHA

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

No data available.

STOT - single exposure

Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs if swallowed. Causes damage to organs in contact with skin. May cause respiratory irritation.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide (1 - 5%) CAS#: 151-50-8	Man TD_{Lo}	13.7 mg/kg	None reported	**Behavioral** Coma Convulsions or effect on seizure threshold **Blood** Metabolic acidosis	RTECS

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide (1 - 5%) CAS#: 151-50-8	Rat TD_{Lo}	4.5 mg/kg	15 days	**Nutritional and Gross Metabolic** Evidence of thyroid hypofunction, Changes in thyroid weight	RTECS

Carcinogenicity
Based on available data, the classification criteria are not met.
Mixture
No data available.
Ingredient Carcinogenicity Data
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
Boron oxide (B2O3) (10 - 20%) CAS#: 1303-86-2	Mutation in microorganisms	Mammalian cells - not specified	None reported	None reported	Negative	RTECS
Potassium cyanide (1 - 5%) CAS#: 151-50-8	DNA inhibition	Mouse lymphocyte	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS

Mixture *invivo* **Data**
No data available.
Substance *invivo* **Data**
No data available.
Reproductive toxicity
Classification based on data available for ingredients. May damage fertility or the unborn child.
Mixture
No data available.
Ingredient Reproductive Toxicity Data
Test data reported below.
Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide (1 - 5%) CAS#: 151-50-8	Domestic mammal - Not specified TD_{Lo}	1767 mg/kg	12 weeks	**Effects on Newborn** Other neonatal measures or effects Weaning or lactation index (e.g. # alive at weaning per # alive at day 4)	RTECS

Aspiration hazard
Based on available data, the classification criteria are not met.
Other adverse effects No information available.

Section 12: Ecological information

Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Mixture

Aquatic Acute Toxicity
No data available.

Aquatic Chronic Toxicity
No data available.
Substance

Aquatic Acute Toxicity
Test data reported below.
Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium cyanide (1 - 5%) CAS#: 151-50-8	96 hours	None reported	LC_{50}	0.068 mg/L	GESTIS

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Boron oxide (B2O3) (10 - 20%) CAS#: 1303-86-2	48 Hours	*Daphnia magna*	LC_{50}	370 mg/L	IUCLID
Potassium cyanide (1 - 5%) CAS#: 151-50-8	48 Hours	None reported	LC_{50}	0.25 mg/L	GESTIS

Aquatic Chronic Toxicity
No data available.
Persistence and degradability

Mixture
No data available.
Bioaccumulation
Material does not bioaccumulate
Mixture
No data available.
Partition coefficient log K_{ow} ~ -1.6
Mobility

Soil Organic Carbon-Water Partition Coefficient log K_{oc} ~ 0.07
Other adverse effects
No information available

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Potassium cyanide (1 - 5%) CAS#: 151-50-8	Group III Chemical	-	-

Section 13: Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

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

Section 14: Transport information

Note: No special precautions necessary.

IATA

14.1 UN number or ID number UN1588
14.2
14.3 Transport hazard class(es) 6.1
14.4 Packing group III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions A3, A13

IMDG

14.1 UN number or ID number UN1588
14.2
14.3 Transport hazard class(es) 6.1
14.4 Packing Group III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 47, 223, 274 F-A S-A
14.7 Maritime transport in bulk according to IMO instruments No information available

Rail transport

14.1 UN number or ID number UN1588
14.2 UN proper shipping name CYANIDES, INORGANIC, SOLID, N.O.S. (Potassium cyanide)
14.3 Transport hazard class(es) 6.1
14.4 Packing Group III
Description UN1588, CYANIDES, INORGANIC, SOLID, N.O.S. (Potassium cyanide), 6.1, III, Environmentally Hazardous
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions None
Classification code T5

Road transport

14.1 UN number or ID number 1588
14.2 UN proper shipping name CYANIDES, INORGANIC, SOLID, N.O.S. (Potassium cyanide)
14.3 Transport hazard class(es) 6.1
14.4 Packing Group III
Description 1588, CYANIDES, INORGANIC, SOLID, N.O.S. (Potassium cyanide), 6.1, III, Environmentally Hazardous
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 47, 274
Classification code T5
Tunnel restriction code (E)

Section 15: Regulatory information

Regulatory information

National regulations

Environmental Protection and Management (Hazardous Substances) Regulations
Verify that license requirements are met.

Chemical name	Hazardous Substances	transport

Potassium cyanide	Present	50kg except Cyanogen chloride

Environmental Public Health Act
Dispose of waste product or used containers according to local regulations.
Hazardous Waste (Control of Export, Import and Transit) Act
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations
Regulated. See section 14 for more information.
Strategic Goods (Control) Act
Verify that requirements related to using, handling, and storing substances subject to prohibition, authorization or restriction are met.

Chemical name	Strategic Goods (Control) Act
Boron potassium oxide (B4K2O7)	1C225
Boron oxide (B2O3)	1C225
Potassium cyanide	1C350

Workplace Safety and Health Act
See section 8 for national exposure control parameters. Comply with the health and safety at work laws.

International Regulations

The Rotterdam Convention Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Contact supplier for inventory compliance status
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies
NZIoC	-
TCSI	Contact supplier for inventory compliance status.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
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
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report No information available

Section 16: Other information

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	Environmental Protection Agency
ERMA	ERMA (New Zealands Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By Hach Product Compliance Department
Issue Date 08-Nov-2024
Revision Date 17-Mar-2025

Revision Note	No information available
Restrictions on use	For Laboratory Use Only.

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

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

End of Safety Data Sheet