SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Permanganate Value

Revision date 01-03-2025 **Revision Number** 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) TBSRPERM

Product Name Permanganate Value

Unique Formula Identifier (UFI) MNCK-KM06-VN11-7WMJ

Pure substance/mixture Mixture

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

Recommended use Reagent for water analysis

Uses advised against Others

1.3. Details of the supplier of the safety data sheet

Manufacturer
Water-i.d. GmbH
Daimlerstr. 20
76344 Eggenstein, Germany
Tel.: +49 (0) 721 78 20 29 0, Fax: +49 (0) 721 78 20 29 11
Website: www.water-id.com
EHS / Compliance: lab@water-id.com

1.4. Emergency telephone number

Emergency Telephone +44 1235 239670
English, Albanian, Bosnian, Bulgarian, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Spanish, Swedish, Turkish and Ukrainian.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Hazardous to the aquatic environment - chronic	Category 3 - (H412)

2.2. Label elements

Hazard statements
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P273 - Avoid release to the environment
P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

2.3. Other hazards

Harmful to aquatic life.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Talc (Mg3H2(SiO3)4) 14807-96-6	1-5	No data available	238-877-9	No data available			
Potassium permanganate 7722-64-7	<1	No data available	231-760-3	Acute Tox. 4 (H302) Repr. 2 (H361d) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Ox. Sol. 2 (H272)			

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

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Talc (Mg3H2(SiO3)4) 14807-96-6	5000	2000			
Potassium permanganate 7722-64-7	750	2000			

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Rinse mouth.

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

Symptoms No information available.

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.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

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

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

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 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 Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

7.3. Specific end use(s)

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	Austria	Belgium	Bulgaria	Croatia
Talc (Mg3H2(SiO3)4) 14807-96-6	-	TWA: 2 mg/m³	TWA: 2 mg/m³	TWA: 1.0 fiber/cm3 TWA: 6.0 mg/m³ TWA: 3.0 mg/m³	TWA: 1 mg/m³
Potassium permanganate 7722-64-7	-	TWA: 0.2 mg/m³ STEL 1.6 mg/m³	TWA: 0.2 mg/m³	TWA: 0.05 mg/m³	TWA: 5 mg/m³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Talc (Mg3H2(SiO3)4) 14807-96-6	-	TWA: 2.0 mg/m³	TWA: 0.003 fiber/cm3	-	TWA: 0.5 fiber/cm3 TWA: 2 mg/m³ TWA: 1 mg/m³
Potassium permanganate 7722-64-7	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 1 mg/m³ Ceiling: 2 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Talc (Mg3H2(SiO3)4) 14807-96-6	-	TWA: 1.25 mg/m³ TWA: 10 mg/m³	-	TWA: 10 mg/m³ TWA: 2 mg/m³	TWA: 2 mg/m³
Potassium permanganate 7722-64-7	-	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³	TWA: 0.2 mg/m³ TWA: 0.02 mg/m³ Peak: 1.6 mg/m³ Peak: 0.16 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Talc (Mg3H2(SiO3)4) 14807-96-6	TWA: 10 mg/m³ TWA: 0.8 mg/m³ STEL: 30 mg/m³ STEL: 2.4 mg/m³	-	TWA: 2 mg/m³	-	TWA: 2 mg/m³ TWA: 1 mg/m³
Potassium permanganate 7722-64-7	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ STEL: 0.6 mg/m³ STEL: 0.15 mg/m³	TWA: 0.05 mg/m³	TWA: 0.1 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Talc (Mg3H2(SiO3)4) 14807-96-6	-	-	TWA: 0.25 mg/m³	STEL: 12 mg/m³ STEL: 4 mg/m³	TWA: 4 mg/m³ TWA: 1 mg/m³
Potassium permanganate 7722-64-7	-	-	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	STEL: 0.6 ppm STEL: 0.15 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Talc (Mg3H2(SiO3)4) 14807-96-6	TWA: 2 mg/m³	TWA: 2 mg/m³	-	-	TWA: 2 mg/m³
Potassium permanganate 7722-64-7	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³	TWA: 0.2 mg/m³	TWA: 0.05 mg/m³ STEL: STEL mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom
Talc (Mg3H2(SiO3)4) 14807-96-6	NGV: 2 mg/m³ NGV: 1 mg/m³	TWA: 3 mg/m³ TWA: 10 mg/m³	TWA: 1 mg/m³ STEL: 3 mg/m³
Potassium permanganate 7722-64-7	NGV: 0.2 mg/m³ NGV: 0.05 mg/m³	TWA: 0.2 mg/m³ TWA: 0.1 mg/m³	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Potassium permanganate 7722-64-7	-	20 µg/L (blood - whole blood not provided) (-)	-	-	-
Chemical name	**Denmark**	**Finland**	**France**	**Germany DFG**	**Germany TRGS**
Potassium permanganate 7722-64-7	-	-	-	15 µg/L - BAR (end of exposure or end of shift) blood 15 µg/L - BAR (for long-term exposures: at the end of the shift after several shifts) blood	-

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC)

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid
Appearance tablet
Colour brown
Odour Odourless.
Odour threshold

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known

Decomposition temperature		None known
pH	7.1	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size		
Particle Size Distribution		

9.2. Other information

9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

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

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2,780.50 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Talc (Mg3H2(SiO3)4)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	
Potassium permanganate	= 750 mg/kg (Rat)	> 2000 mg/kg (Rat)	

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

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

Chemical name	European Union
Potassium permanganate	Repr. 2

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties

11.2.2. Other information

Other adverse effects

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 2.5 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Talc (Mg3H2(SiO3)4)	-	LC50: >100g/L (96h, Brachydanio rerio)	-	-
Potassium permanganate	-	LC50: 0.769 - 1.27mg/L (96h, Oncorhynchus mykiss) LC50: 1.08 - 1.38mg/L (96h, Oncorhynchus mykiss) LC50: 1.8 - 5.6mg/L (96h, Lepomis macrochirus) LC50: 2.97 - 3.11mg/L (96h, Cyprinus carpio) LC50: 3.16 - 3.77mg/L (96h, Cyprinus carpio) LC50: =2.3mg/L (96h, Lepomis macrochirus) LC50: =2.7mg/L (96h, Lepomis macrochirus)	-	-

12.2. Persistence and degradability

Persistence and degradability

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Talc (Mg3H2(SiO3)4)	The substance is not PBT / vPvB
Potassium permanganate	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Endocrine disrupting properties

Endocrine disrupting properties

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. 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.

SECTION 14: Transport information

IATA

Notes	**No components found suitable for Technical Name.**
14.1 UN number or ID number	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	A158, A179, A97, A197
ERG Code	9L

IMDG

Notes	**No components found suitable for Technical Name.**
14.1 UN number or ID number	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III, Marine pollutant
14.5 Marine pollutant	P
Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 966, 967, 969
EmS-No	F-A, S-F
14.7 Maritime transport in bulk according to IMO instruments	

RID

Notes	**No components found suitable for Technical Name.**
14.1 UN number or ID number	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 375, 601
Classification code	M7

ADR

Notes	**No components found suitable for Technical Name.**
14.1 UN number or ID number	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3 Transport hazard class(es)	9

14.4 Packing group	III
Description	UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III, (-)
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 601, 375
Classification code	M7
Tunnel restriction code	(-)

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Talc (Mg3H2(SiO3)4) 14807-96-6	RG 25	-

Water hazard class (WGK) obviously hazardous to water (WGK 2)

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Carcinogens	Netherlands - List of Reproductive Toxins
Potassium permanganate	-	-	Development Category 2

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.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) Regulation (EU) 2024/590

Not applicable

EU - Plant Protection Products (1107/2009/EC)

Chemical name	EU - Plant Protection Products (1107/2009/EC)
Talc (Mg3H2(SiO3)4) - 14807-96-6	Plant protection agent

International Inventories

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

Legend:
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

15.2. Chemical safety assessment

Chemical Safety Report

SECTION 16: Other information

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

Full text of any hazard and/or precautionary statements referred to under Sections 2-15
H272 - May intensify fire; oxidiser
H302 - Harmful if swallowed
H361d - Suspected of damaging the unborn child
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

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	Calculation method
Serious eye damage/eye irritation	Calculation method
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 hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 01-03-2025

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