

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 11-29-2021

Revision Number 2

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 Poison Control Centre Munich
Tel.: +49 (0) 89 19 24 0
Germany
24 hours service
Languages: German, English

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 3 - (H412)
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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/ container to an approved waste disposal plant

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	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Talc (Mg ₃ H ₂ (SiO ₃) 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 16Acute 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	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Potassium permanganate 7722-64-7	750				

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (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	Clean mouth with water and drink afterwards plenty of water.

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 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 Keep container tightly closed in a dry and well-ventilated place.

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 (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	-	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 1.0 fiber/cm ³ TWA: 6.0 mg/m ³ TWA: 3.0 mg/m ³	TWA: 1 mg/m ³
Potassium permanganate 7722-64-7	-	TWA: 0.2 mg/m ³ STEL 1.6 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.05 mg/m ³	TWA: 5 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	-	TWA: 2.0 mg/m ³	TWA: 0.3 fiber/cm ³	-	TWA: 0.5 fiber/cm ³ TWA: 2 mg/m ³ TWA: 1 mg/m ³
Potassium permanganate 7722-64-7	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 1 mg/m ³ Ceiling: 2 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³
Chemical name	France	Germany	Germany MAK	Greece	Hungary
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	-	TWA: 1.25 mg/m ³ TWA: 10 mg/m ³	-	TWA: 10 mg/m ³ TWA: 2 mg/m ³	TWA: 2 mg/m ³
Potassium permanganate 7722-64-7	-	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³ Peak: 1.6 mg/m ³ Peak: 0.16 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	-
Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	TWA: 10 mg/m ³ TWA: 0.8 mg/m ³ STEL: 30 mg/m ³ STEL: 2.4 mg/m ³	-	TWA: 2 mg/m ³	-	TWA: 2 mg/m ³ TWA: 1 mg/m ³
Potassium permanganate 7722-64-7	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³ STEL: 0.6 mg/m ³ STEL: 0.15 mg/m ³	TWA: 0.05 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	-	-	TWA: 0.25 mg/m ³	TWA: 6 mg/m ³ TWA: 2 mg/m ³ STEL: 12 mg/m ³ STEL: 4 mg/m ³	TWA: 4 mg/m ³ TWA: 1 mg/m ³
Potassium permanganate 7722-64-7	-	-	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³ STEL: 0,6 ppm STEL: 0.15 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	TWA: 2 mg/m ³	TWA: 2 mg/m ³	-	-	TWA: 2 mg/m ³
Potassium permanganate 7722-64-7	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.05 mg/m ³ STEL: STEL mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
Chemical name	Sweden		Switzerland	United Kingdom	
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	NGV: 2 mg/m ³ NGV: 1 mg/m ³		TWA: 2 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³	

Potassium permanganate 7722-64-7	NGV: 0.2 mg/m ³ NGV: 0.05 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.05 mg/m ³
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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	Germany MAK
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) No information available.

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 No information available

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	No data available	

limits		
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	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

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
Potassium permanganate	= 750 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 No information available.

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

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Talc (Mg ₃ H ₂ (SiO ₃) 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 No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

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

Chemical name	PBT and vPvB assessment
Talc (Mg ₃ H ₂ (SiO ₃) 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 No information available.

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 No information available

14.7 Maritime transport in bulk according to IMO instruments

No information available

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 (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6	RG 25	-

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 (EC) 1005/2009

Not applicable

Plant protection products directive (91/414/EEC)

Chemical name	Plant protection products directive (91/414/EEC)
Talc (Mg ₃ H ₂ (SiO ₃) 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 No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

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

11-29-2021

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

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet