

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2021

Reviewed on 06/01/2021

1 Identification

- **Product identifier**
- **Trade name:** *Potassium Permanganate, Reagent, A.C.S.*
- **Article number:** 20200
- **CAS Number:**
7722-64-7
- **EC number:**
231-760-3
- **Index number:**
025-002-00-9
- **Application of the substance / the mixture** *Laboratory chemicals*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com*
- **Information department:** *Product safety department*
- **Emergency telephone number:**
*ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887*

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 *Flame over circle*

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS08 *Health hazard*

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**

· **GHS label elements** *The substance is classified and labeled according to the Globally Harmonized System (GHS).*

- **Hazard pictograms**



GHS03



GHS07



GHS08

- **Signal word** *Danger*

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- **Hazard statements**

May intensify fire; oxidizer.
Harmful if swallowed.
Suspected of damaging fertility or the unborn child.

- **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat.
Keep/Store away from clothing/combustible materials.
Take any precaution to avoid mixing with combustibles.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves / eye protection / face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

The substance possesses oxidizing properties.

- **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

7722-64-7 Potassium Permanganate, Reagent, A.C.S.

- **Identification number(s)**

- **EC number:** 231-760-3

- **Index number:** 025-002-00-9

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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 8.6 mg/m³
- **PAC-2:** 14 mg/m³
- **PAC-3:** 150 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

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· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7722-64-7 Potassium Permanganate, Reagent, A.C.S.

PEL Ceiling limit value: 5 mg/m³
as Mn

REL Short-term value: 3 mg/m³
Long-term value: 1 mg/m³
as Mn

TLV Long-term value: 0.02 * 0.1 ** mg/m³
as Mn; *respirable **inhalable fraction

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:**

Crystalline

· **Color:**

Not determined.

· **Odor:**

Characteristic

· **Odor threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

· **Melting point/Melting range:**

>240 °C (>464 °F)

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Trade name: Potassium Permanganate, Reagent, A.C.S.

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· Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Contact with combustible material may cause fire.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	0 hPa
· Density at 20 °C (68 °F):	2.703 g/cm ³ (22.55654 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
· Water at 20 °C (68 °F):	64.3 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	1,090 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.

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- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
*Water hazard class 3 (Assessment by list): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Danger to drinking water if even extremely small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|----------------------------------|--|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN1490 |
| · UN proper shipping name | |
| · DOT | Potassium permanganate |
| · ADR | 1490 POTASSIUM PERMANGANATE, ENVIRONMENTALLY HAZARDOUS |
| · IMDG, IATA | POTASSIUM PERMANGANATE |

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· **Transport hazard class(es)**· **DOT**· **Class**

5.1 Oxidizing substances

· **Label**

5.1

· **ADR**· **Class**

5.1 Oxidizing substances

· **Label**

5.1

· **IMDG, IATA**· **Class**

5.1 Oxidizing substances

· **Label**

5.1

· **Packing group**· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards:**

Environmentally hazardous substance, solid

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Oxidizing substances

· **Hazard identification number (Kemler code):** 50· **EMS Number:**

5.1-06

· **Segregation groups**

Permanganates

· **Stowage Category**

D

· **Segregation Code**

SG38 Stow "separated from" SGG2-ammonium compounds.

SG49 Stow "separated from" SGG6-cyanides

SG60 Stow "separated from" SGG16-peroxides

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **DOT**· **Quantity limitations**

On passenger aircraft/rail: 5 kg

On cargo aircraft only: 25 kg

· **Hazardous substance:**

100 lbs, 45.4 kg

· **ADR**· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

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<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS</p>

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency) D**
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS03 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard statements**
 - May intensify fire; oxidizer.
 - Harmful if swallowed.
 - Suspected of damaging fertility or the unborn child.
- **Precautionary statements**
 - Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Keep away from heat.
 - Keep/Store away from clothing/combustible materials.
 - Take any precaution to avoid mixing with combustibles.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Wear protective gloves / eye protection / face protection.
 - If swallowed: Call a poison center/doctor if you feel unwell.
 - Rinse mouth.
 - IF exposed or concerned: Get medical advice/attention.
 - In case of fire: Use for extinction: CO2, powder or water spray.

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Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Date of preparation / last revision 06/01/2021 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

*OSHA: Occupational Safety **Health***

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Repr. 2: Reproductive toxicity – Category 2

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according to WHS Regulations

Printing date 01.06.2021

Revision: 01.06.2021

1 Identification

- **Product identifier**
- **Trade name:** Potassium Permanganate, Reagent, A.C.S.
- **Article number:** 20200
- **CAS Number:**
7722-64-7
- **EC number:**
231-760-3
- **Index number:**
025-002-00-9
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS03 flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.



GHS08 health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

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Trade name: Potassium Permanganate, Reagent, A.C.S.

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GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **Label elements**

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS03

GHS07

GHS08

· **Signal word** Danger

· **Hazard statements**

May intensify fire; oxidiser.

Harmful if swallowed.

Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat.

Keep/Store away from clothing/combustible materials.

Take any precaution to avoid mixing with combustibles.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves / eye protection / face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

· **Chemical characterisation: Substances**

· **CAS No. Description**

7722-64-7 Potassium Permanganate, Reagent, A.C.S.

· **Identification number(s)**

· **EC number:** 231-760-3

· **Index number:** 025-002-00-9

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Trade name: Potassium Permanganate, Reagent, A.C.S.

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4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

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8 Exposure controls and personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

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WES	Long-term value: 1 mg/m ³ as Mn
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· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:**

Crystalline

· **Colour:**

Not determined.

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

· **Melting point/freezing point:**

>240 °C

· **Initial boiling point and boiling range:** Undetermined.

· **Flash point:**

Not applicable.

· **Flammability (solid, gas):**

Contact with combustible material may cause fire.

· **Decomposition temperature:**

Not determined.

· **Auto-ignition temperature:**

Not determined.

· **Explosive properties:**

Product does not present an explosion hazard.

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· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapour pressure at 20 °C:	0 hPa
· Density at 20 °C:	2.703 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water at 20 °C:	64.3 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

Oral	LD50	1,090 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Repr. 2

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

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Trade name: Potassium Permanganate, Reagent, A.C.S.

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- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Danger to drinking water if even extremely small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA 	<p style="text-align: center;">UNI490</p>
<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG, IATA 	<p style="text-align: center;">1490 POTASSIUM PERMANGANATE, ENVIRONMENTALLY HAZARDOUS POTASSIUM PERMANGANATE</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · ADG 	<p style="text-align: center;">5.1 Oxidising substances. 5.1</p>
<ul style="list-style-type: none"> · IMDG, IATA 	<p style="text-align: center;">5.1 Oxidising substances. 5.1</p>
<ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA 	<p style="text-align: center;">II</p>

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Safety Data Sheet

according to WHS Regulations

Printing date 01.06.2021

Revision: 01.06.2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 6)

· Environmental hazards:	Environmentally hazardous substance, solid
· Special marking (ADG):	Symbol (fish and tree)
· Special precautions for user	Warning: Oxidising substances.
· Hazard identification number (Kemler code):	50
· EMS Number:	5.1-06
· Segregation groups	Permanganates
· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Australian Inventory of Industrial Chemicals** Substance is listed.
- **Standard for the Uniform Scheduling of Medicines and Poisons** Substance is not listed.
- **Australia: Priority Existing Chemicals** Substance is not listed.
- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS03 GHS07 GHS08

- **Signal word** Danger
- **Hazard statements**
May intensify fire; oxidiser.
Harmful if swallowed.
Suspected of damaging fertility or the unborn child.

(Contd. on page 8)

-AU-

Safety Data Sheet

according to WHS Regulations

Printing date 01.06.2021

Revision: 01.06.2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 7)

· **Precautionary statements**

- Obtain special instructions before use.*
- Do not handle until all safety precautions have been read and understood.*
- Keep away from heat.*
- Keep/Store away from clothing/combustible materials.*
- Take any precaution to avoid mixing with combustibles.*
- Wash thoroughly after handling.*
- Do not eat, drink or smoke when using this product.*
- Wear protective gloves / eye protection / face protection.*
- IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*
- Rinse mouth.*
- IF exposed or concerned: Get medical advice/attention.*
- In case of fire: Use for extinction: CO₂, powder or water spray.*
- Store in a well-ventilated place. Keep container tightly closed.*
- Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category**

P8 OXIDISING LIQUIDS AND SOLIDS

E1 Hazardous to the Aquatic Environment

- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity - oral – Category 4

Repr. 2: Reproductive toxicity – Category 2

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/01/2021

Reviewed on 06/01/2021

1 Identification

- **Product identifier**
- **Trade name:** Potassium Permanganate, Reagent, A.C.S.
- **Article number:** 20200
- **CAS Number:**
7722-64-7
- **EC number:**
231-760-3
- **Index number:**
025-002-00-9
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

Oxidizing Solids – Category 2 H272 May intensify fire; oxidizer.



GHS08 Health hazard

Reproductive Toxicity - Category 2 H361 Suspected of damaging fertility or the unborn child.



GHS07

Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS03



GHS07



GHS08

- **Signal word** *Danger*

(Contd. on page 2)

Safety Data Sheet

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Printing date 06/01/2021

Reviewed on 06/01/2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 1)

- **Hazard statements**

May intensify fire; oxidizer.
Harmful if swallowed.
Suspected of damaging fertility or the unborn child.

- **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep away from clothing and other combustible materials.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

The substance possesses oxidizing properties.

- **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

3 Composition/Information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
7722-64-7 Potassium Permanganate, Reagent, A.C.S.
- **Identification number(s)**
- **EC number: 231-760-3**
- **Index number: 025-002-00-9**

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.

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Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/01/2021

Reviewed on 06/01/2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 2)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7722-64-7 Potassium Permanganate, Reagent, A.C.S.

EL	TWA: 0.2; 0.02* mg/m ³ as Mn; R, *respirable
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- **Additional information:** The lists that were valid during the creation were used as basis.

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Safety Data Sheet

according to HPR, Schedule 1

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Reviewed on 06/01/2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 3)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Not required.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
- **Form:** Crystalline
- **Color:** Not determined.
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
- **Melting point/Melting range:** >240 °C
- **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Contact with combustible material may cause fire.
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Not determined.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Vapor pressure at 20 °C:** 0 hPa
- **Density at 20 °C:** 2.703 g/cm³
- **Relative density** Not determined.
- **Vapor density** Not applicable.
- **Evaporation rate** Not applicable.

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Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/01/2021

Reviewed on 06/01/2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 4)

- | | |
|---|--|
| · Solubility in / Miscibility with | |
| · Water at 20 °C: | 64.3 g/l |
| · Partition coefficient (n-octanol/water): Not determined. | |
| · Viscosity: | |
| · Dynamic: | Not applicable. |
| · Kinematic: | Not applicable. |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	1,090 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxic effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
- Water hazard class 3 (Assessment by list): extremely hazardous for water
- Do not allow product to reach ground water, water course or sewage system, even in small quantities.
- Danger to drinking water if even extremely small quantities leak into the ground.

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Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/01/2021

Reviewed on 06/01/2021

Trade name: Potassium Permanganate, Reagent, A.C.S.





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- Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT/TDG, ADR, IMDG, IATA** UN1490
- **UN proper shipping name**
- **DOT/TDG** Potassium permanganate
- **ADR** 1490 POTASSIUM PERMANGANATE, ENVIRONMENTALLY HAZARDOUS
- **IMDG, IATA** POTASSIUM PERMANGANATE
- **Transport hazard class(es)**
- **DOT/TDG (Transport dangerous goods):**
- 
- **Class** 5.1 Oxidizing substances
- **Label** 5.1
- **ADR**
- 

- **Class** 5.1 Oxidizing substances
- **Label** 5.1
- **IMDG, IATA**
- 
- **Class** 5.1 Oxidizing substances
- **Label** 5.1

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Printing date 06/01/2021

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Trade name: Potassium Permanganate, Reagent, A.C.S.

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· Packing group · DOT/TDG, ADR, IMDG, IATA	II
· Environmental hazards: · Special marking (ADR):	Environmentally hazardous substance, solid Symbol (fish and tree)
· Special precautions for user · Hazard identification number (Kemler code): 50 · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Oxidizing substances 5.1-06 Permanganates D SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT/TDG · Quantity limitations · Hazardous substance:	On passenger aircraft/rail: 5 kg On cargo aircraft only: 25 kg 100 lbs, 45.4 kg
· ADR · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

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Safety Data Sheet

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Printing date 06/01/2021

Reviewed on 06/01/2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

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· **Hazard pictograms**



GHS03 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard statements**

May intensify fire; oxidizer.

Harmful if swallowed.

Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep away from clothing and other combustible materials.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of the latest revision of the safety data sheet** 06/01/2021 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.06.2021

Revision: 01.06.2021

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

· **1.1 Product identifier**

· **Trade name:** Potassium Permanganate, Reagent, A.C.S.

· **Article number:** 20200

· **CAS Number:**

7722-64-7

· **EC number:**

231-760-3

· **Index number:**

025-002-00-9

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

No further relevant information available.

· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

· **Further information obtainable from:** Product safety department

· **1.4 Emergency telephone number:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS03 flame over circle

Ox. Sol. 2

H272 May intensify fire; oxidiser.



GHS08 health hazard

Repr. 2

H361d Suspected of damaging the unborn child.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4

H302 Harmful if swallowed.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.06.2021

Revision: 01.06.2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 1)

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS03 GHS07 GHS08 GHS09

· **Signal word** *Danger*

· **Hazard statements**

H272 *May intensify fire; oxidiser.*

H302 *Harmful if swallowed.*

H361d *Suspected of damaging the unborn child.*

H410 *Very toxic to aquatic life with long lasting effects.*

· **Precautionary statements**

P210 *Keep away from heat. - No smoking.*

P220 *Keep away from clothing and other combustible materials.*

P280 *Wear protective gloves/protective clothing/eye protection/face protection.*

P301+P312 *IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

P405 *Store locked up.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

7722-64-7 Potassium Permanganate, Reagent, A.C.S.

· **Identification number(s)**

· **EC number:** 231-760-3

· **Index number:** 025-002-00-9

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

· **After skin contact:** *Generally the product does not irritate the skin.*

· **After eye contact:** *Rinse opened eye for several minutes under running water.*

· **After swallowing:** *Call for a doctor immediately.*

· **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.06.2021

Revision: 01.06.2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

(Contd. of page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7722-64-7 Potassium Permanganate, Reagent, A.C.S.

WEL	Long-term value: 0.2* 0.05** mg/m ³ as Mn *inhalable fraction **respirable fraction
-----	---

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.06.2021

Revision: 01.06.2021

Trade name: Potassium Permanganate, Reagent, A.C.S.

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- Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
 - **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 - **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
 - **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Not required.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

- **Form:** Crystalline
- **Colour:** Not determined.
- **Odour:** Characteristic
- **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

· Change in condition

- **Melting point/freezing point:** >240 °C
- **Initial boiling point and boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Contact with combustible material may cause fire.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Product does not present an explosion hazard.

· Explosion limits:

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapour pressure at 20 °C:** 0 hPa

- **Density at 20 °C:** 2.703 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.

· Solubility in / Miscibility with

· **water at 20 °C:** 64.3 g/l

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

· **Dynamic:** Not applicable.

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- | | |
|--------------------------------|--|
| · Kinematic: | Not applicable. |
| · 9.2 Other information | No further relevant information available. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

- **LD/LC50 values relevant for classification:**

Oral	LD50	1,090 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
Suspected of damaging the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|---|
| · 14.1 UN-Number
· ADR, IMDG, IATA | UN1490 |
| · 14.2 UN proper shipping name
· ADR
· IMDG, IATA | 1490 POTASSIUM PERMANGANATE, ENVIRONMENTALLY HAZARDOUS
POTASSIUM PERMANGANATE |
| · 14.3 Transport hazard class(es)
· ADR |  |
| · Class
· Label | 5.1 Oxidising substances.
5.1 |
| · IMDG, IATA |  |
| · Class
· Label | 5.1 Oxidising substances.
5.1 |
| · 14.4 Packing group
· ADR, IMDG, IATA | II |
| · 14.5 Environmental hazards:
· Special marking (ADR): | Environmentally hazardous substance, solid
Symbol (fish and tree) |
| · 14.6 Special precautions for user
· Hazard identification number (Kemler code):
· EMS Number:
· Segregation groups | Warning: Oxidising substances.
50
5.1-06
Permanganates |

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· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I Substance is not listed.**
- **Seveso category**
P8 OXIDISING LIQUIDS AND SOLIDS
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent

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*LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Ox. Sol. 2: Oxidizing solids – Category 2**Acute Tox. 4: Acute toxicity - oral – Category 4**Repr. 2: Reproductive toxicity – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

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RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

· 1.1 Productidentificatie

· **Handelsnaam:** kaliumpermanganaat

· **Artikelnummer:** 20200

· **CAS-nummer:**

7722-64-7

· **EC-nummer:**

231-760-3

· **Catalogusnummer:**

025-002-00-9

· **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**

Geen verdere relevante informatie verkrijgbaar.

· **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën

· **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**

· **Fabrikant/leverancier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: info@aurion.nl

· **Inlichtingengevende sector:** Product safety department

· **1.4 Telefoonnummer voor noodgevallen:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

· **2.1 Indeling van de stof of het mengsel**

· **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS03 vlam boven cirkel

Ox. Sol. 2

H272 Kan brand bevorderen; oxiderend.



GHS08 gezondheidsgevaar

Repr. 2

H361d Wordt ervan verdacht het ongeboren kind te schaden.



GHS09 milieu

Aquatic Acute 1 H400 Zeer giftig voor in het water levende organismen.

Aquatic Chronic 1 H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

(Vervolg op blz. 2)

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GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.

2.2 Etiketteringselementen

Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

De stof/product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

Gevarenpictogrammen



GHS03

GHS07

GHS08

GHS09

Signaalwoord Gevaar

Gevarenaanduidingen

H272 Kan brand bevorderen; oxiderend.

H302 Schadelijk bij inslikken.

H361d Wordt ervan verdacht het ongeboren kind te schaden.

H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

Veiligheidsaanbevelingen

P210 Verwijderd houden van warmte - niet roken.

P220 Verwijderd houden van kleding en andere brandbare materialen.

P280 Beschermende handschoenen/beschermende kleding/oogbescherming/gelaatsbescherming dragen.

P301+P312 NA INSLIKKEN: bij onwel voelen een ANTIGIFCENTRUM/arts raadplegen.

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

2.3 Andere gevaren

Resultaten van PBT- en zPzB-beoordeling

- PBT: Niet bruikbaar.

- zPzB: Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

3.1 Chemische karakterisering: Stoffen

CAS-Nr. omschrijving

7722-64-7 kaliumpermanganaat

Identificatienummer(s)

- EC-nummer: 231-760-3

- Catalogusnummer: 025-002-00-9

RUBRIEK 4: Eerstehulpmaatregelen

4.1 Beschrijving van de eerstehulpmaatregelen

Algemene informatie:

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

- Na het inademen: Frisse lucht toedienen; bij klachten arts ontbieden.

- Na huidcontact: Over het algemeen is het produkt niet prikkelend voor de huid

- Na oogcontact: Ogen bij geopend ooglid meerdere minuten met stromend water spoelen

(Vervolg op blz. 3)

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- **Na inslikken:** Onmiddellijk arts raadplegen.
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**
Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:** Brandblusmaatregelen op omgeving afstemmen.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermingsmiddelen en noodprocedures** Niet nodig.
- **6.2 Milieuvoorzorgsmaatregelen:**
Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.
Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:** Besmet materiaal zoals afval volgens punt 13 verwijderen.
- **6.4 Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Bij een deskundig gebruik zijn geen bijzondere maatregelen vereist.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Geen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**

· **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

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WGW Lange termijn waarde: 0,2* 0,05** mg/m³
als Mn; *inhaleerbaar **respirabel

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

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- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Vóór de pauze en aan het einde van werktijd handen wassen.
- **Ademhalingsbescherming:** Niet noodzakelijk.
- **Handbescherming:**
Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.
- **Handschoenmateriaal**
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant.
- **Doordringingstijd van het handschoenmateriaal**
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:** Niet noodzakelijk.

RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**
- **Algemene gegevens**
- **Voorkomen:**
- **Vorm:** Kristallijn
- **Kleur:** Niet bepaald.
- **Geur:** Karakteristiek
- **Geurdrempelwaarde:** Niet bepaald.
- **pH-waarde:** Niet bruikbaar.
- **Toestandsverandering**
- **Smelt-/vriespunt:** >240 °C
- **Beginkookpunt en kooktraject:** Niet bepaald.
- **Vlampunt:** Niet bruikbaar.
- **Ontvlambaarheid (vast, gas):** Bevordert de ontbranding van brandbare stoffen.
- **Ontledingstemperatuur:** Niet bepaald.
- **Zelfontbrandingstemperatuur:** Niet bepaald.
- **Ontploffingseigenschappen:** Het produkt is niet ontploffingsgevaarlijk.
- **Ontploffingsgrenzen:**
- **Onderste:** Niet bepaald.
- **Bovenste:** Niet bepaald.
- **Dampspanning bij 20 °C:** 0 hPa
- **Dichtheid bij 20 °C:** 2,703 g/cm³
- **Relatieve dichtheid** Niet bepaald.
- **Dampdichtheid** Niet bruikbaar.
- **Verdampingssnelheid** Niet bruikbaar.
- **Oplosbaarheid in/mengbaarheid met**
- **Water bij 20 °C:** 64,3 g/l

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- **Verdelingscoëfficiënt: n-octanol/water:** Niet bepaald.
- **Viscositeit**
- **Dynamisch:** Niet bruikbaar.
- **Kinematisch:** Niet bruikbaar.
- **9.2 Overige informatie** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
Schadelijk bij inslikken.

· **Indelingsrelevantie LD/LC50-waarden:**

Oraal	LD50	1.090 mg/kg (rat)
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- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting**
Wordt ervan verdacht het ongeboren kind te schaden.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:** Zeer giftig voor vissen.

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- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): A(1) zeer vergiftig voor in water levende organismen kan in aquatische milieu op lange termijn schadelijke effecten veroorzaken
Gevaar voor water klasse 3 (D) (Lijstclassificatie): gevaar voor water groot
Niet lozen in grondwater, oppervlaktewater of riolering, ook niet in kleine hoeveelheden.
Gevaar voor drinkwater zelfs bij het uitlopen van zeer geringe hoeveelheden in de ondergrond.
In oppervlaktewater ook giftig voor vissen en plankton.
zeer giftig voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|--|---|
| · 14.1 VN-nummer | |
| · ADR, IMDG, IATA | UN1490 |
| · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN | |
| · ADR | 1490 KALIUMPERMANGANAAT, MILIEUGEVAARLIJK |
| · IMDG, IATA | POTASSIUM PERMANGANATE |
| · 14.3 Transportgevaarenklasse(n) | |
| · ADR | |
| | |
| · klasse | 5.1 Oxiderende stoffen |
| · Etiket | 5.1 |
| · IMDG, IATA | |
| | |
| · Class | 5.1 Oxiderende stoffen |
| · Label | 5.1 |
| · 14.4 Verpakkingsgroep: | |
| · ADR, IMDG, IATA | II |
| · 14.5 Milieugevaren: | Milieugevaarlijke vaste stof |

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 01.06.2021

Herziening van: 01.06.2021

Handelsnaam: kaliumpermanganaat

(Vervolg van blz. 6)

· Bijzondere kenmerking (ADR):	Symbol (vis en boom)
· 14.6 Bijzondere voorzorgen voor de gebruiker	Waarschuwing: Oxiderende stoffen
· Gevaarsidentificatienummer (Kemler-getal):	50
· EMS-nummer:	5.1-06
· Segregation groups	Permanganates
· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code	Niet bruikbaar.
· Transport/verdere gegevens:	
· ADR	
· Beperkte hoeveelheden (LQ)	1 kg
· Uitgezonderde hoeveelheden (EQ)	Code: E2 Grootste netto hoeveelheid per binnenverpakking: 30 g Grootste netto hoeveelheid per buitenverpakking: 500 g
· Vervoerscategorie	2
· Tunnelbeperkingscode	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· VN "Model Regulation":	UN 1490 KALIUMPERMANGANAAT, 5.1, II, MILIEUGEVAARLIJK

RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**
- **SZW-lijst van kankerverwekkende stoffen** De stof is niet aanwezig.
- **SZW-lijst van mutagene stoffen** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling 2**
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding** De stof is niet aanwezig.
- **Lijst Zeer Zorgwekkende Stoffen (ZZS)** De stof is niet aanwezig.
- **Lijst van Potentieel Zeer Zorgwekkende Stoffen** De stof is niet aanwezig.
- **Richtlijn 2012/18/EU**
- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** De stof is niet aanwezig.
- **Seveso-categorie**
P8 OXIDERENDE VLOEISTOFFEN EN VASTE STOFFEN
E1 Gevaar voor het aquatisch milieu
- **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen** 50 t
- **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen** 200 t
- **Richtlijn 2011/65/EU betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur - Bijlage II**
De stof is niet aanwezig.

(Vervolg op blz. 8)

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- **Nationale voorschriften:**
- **Gevaarklasse v. water:**
Waterbezwaarlijkheid (NL): A(1) zeer vergiftig voor in water levende organismen kan in aquatische milieu op lange termijn schadelijke effecten veroorzaken
- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

- **Afkortingen en acroniemen:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxiderende vaste stoffen – Categorie 2

Acute Tox. 4: Acute toxiciteit - oraal – Categorie 4

Repr. 2: Voortplantingstoxiciteit – Categorie 2

Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1

Aquatic Chronic 1: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 1

NL

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

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RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

· **1.1 Identificateur de produit**

· **Nom du produit:** permanganate de potassium

· **Code du produit:** 20200

· **No CAS:**
7722-64-7

· **Numéro CE:**
231-760-3

· **Numéro index:**
025-002-00-9

· **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**

Pas d'autres informations importantes disponibles.

· **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires

· **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**

· **Producteur/fournisseur:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

· **Service chargé des renseignements:** Product safety department

· **1.4 Numéro d'appel d'urgence:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

RUBRIQUE 2: Identification des dangers

· **2.1 Classification de la substance ou du mélange**

· **Classification selon le règlement (CE) n° 1272/2008**



GHS03 flamme au-dessus d'un cercle

Ox. Sol. 2

H272 Peut aggraver un incendie; comburant.



GHS08 danger pour la santé

Repr. 2

H361d Susceptible de nuire au fœtus.



GHS09 environnement

Aquatic Acute 1 H400 Très toxique pour les organismes aquatiques.

Aquatic Chronic 1 H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.



GHS07

Acute Tox. 4

H302 Nocif en cas d'ingestion.

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- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** La substance est classifiée et étiquetée selon le règlement CLP.
- **Pictogrammes de danger**



GHS03 GHS07 GHS08 GHS09

- **Mention d'avertissement** Danger
- **Mentions de danger**
 - H272 Peut aggraver un incendie; comburant.
 - H302 Nocif en cas d'ingestion.
 - H361d Susceptible de nuire au fœtus.
 - H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- **Conseils de prudence**
 - P210 Tenir à l'écart de la chaleur. - Ne pas fumer.
 - P220 Tenir à l'écart des vêtements et d'autres matières combustibles.
 - P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.
 - P301+P312 EN CAS D'INGESTION: Appeler un CENTRE ANTIPOISON/un médecin en cas de malaise.
 - P405 Garder sous clef.
 - P501 Éliminer le contenu/réceptacle conformément à la réglementation locale/régionale/nationale/internationale.
- **2.3 Autres dangers**
- **Résultats des évaluations PBT et vPvB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

- **3.1 Caractérisation chimique: Substances**
- **No CAS Désignation**
7722-64-7 permanganate de potassium
- **Code(s) d'identification**
- **Numéro CE:** 231-760-3
- **Numéro index:** 025-002-00-9

RUBRIQUE 4: Premiers secours

- **4.1 Description des premiers secours**
- **Remarques générales:**
Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.
- **Après inhalation:** Donner de l'air frais, consulter un médecin en cas de troubles.
- **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.
- **Après contact avec les yeux:**
Rincer les yeux, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.
- **Après ingestion:** Consulter immédiatement un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

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- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**
Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:**
En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
- **6.4 Référence à d'autres rubriques**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**
Aucune mesure particulière n'est nécessaire en cas de bonne utilisation.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Néant.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

- **8.1 Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

7722-64-7 permanganate de potassium
--

VLEP	Valeur à long terme: 0,05* 0,20** mg/m ³ *fraction alvéolaire **inhalable; en manganèse
-------------	---

- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

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- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Se laver les mains avant les pauses et en fin de travail.
- **Protection respiratoire:** N'est pas nécessaire.
- **Protection des mains:**
Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.
- **Matériau des gants**
Le choix de gants appropriés ne dépend pas seulement du matériau, mais également d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre.
- **Temps de pénétration du matériau des gants**
Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.
- **Protection des yeux:** Pas nécessaire.

RUBRIQUE 9: Propriétés physiques et chimiques

- **9.1 Informations sur les propriétés physiques et chimiques essentielles**
- **Indications générales**
- **Aspect:**
- **Forme:** Cristalline
- **Couleur:** Non déterminé.
- **Odeur:** Caractéristique
- **Seuil olfactif:** Non déterminé.
- **valeur du pH:** Non applicable.
- **Changement d'état**
- **Point de fusion/point de congélation:** >240 °C
- **Point initial d'ébullition et intervalle d'ébullition:** Non déterminé.
- **Point d'éclair** Non applicable.
- **Inflammabilité (solide, gaz):** Favorise l'inflammation des matières combustibles.
- **Température de décomposition:** Non déterminé.
- **Température d'auto-inflammabilité:** Non déterminé.
- **Propriétés explosives:** Le produit n'est pas explosif.
- **Limites d'explosion:**
- **Inférieure:** Non déterminé.
- **Supérieure:** Non déterminé.
- **Pression de vapeur à 20 °C:** 0 hPa
- **Densité à 20 °C:** 2,703 g/cm³
- **Densité relative** Non déterminé.
- **Densité de vapeur:** Non applicable.
- **Taux d'évaporation:** Non applicable.
- **Solubilité dans/miscibilité avec**
- **l'eau à 20 °C:** 64,3 g/l

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- | | |
|---|--|
| · Coefficient de partage: n-octanol/eau: | Non déterminé. |
| · Viscosité: | |
| · Dynamique: | Non applicable. |
| · Cinématique: | Non applicable. |
| · 9.2 Autres informations | Pas d'autres informations importantes disponibles. |

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
 - **Toxicité aiguë**
Nocif en cas d'ingestion.
- | | |
|--|------------------------|
| · Valeurs LD/LC50 déterminantes pour la classification: | |
| Oral | LD50 1.090 mg/kg (rat) |
- **Effet primaire d'irritation:**
 - **Corrosion cutanée/irritation cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Lésions oculaires graves/irritation oculaire**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Sensibilisation respiratoire ou cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
 - **Mutagenicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Toxicité pour la reproduction**
Susceptible de nuire au fœtus.
 - **Toxicité spécifique pour certains organes cibles - exposition unique**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
 - **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

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- **Effets écotoxiques:**
- **Remarque:** Très toxique chez les poissons.
- **Autres indications écologiques:**
- **Indications générales:**
 Catégorie de pollution des eaux 3 (D) (classification selon liste): très polluant
 Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations, même pas en petite quantité.
 Danger pour l'eau potable dès fuite d'une quantité minimale dans le sous-sol.
 Dans les eaux, également toxique pour les poissons et le plancton.
 Très toxique pour organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

RUBRIQUE 14: Informations relatives au transport

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 Numéro ONU · ADR, IMDG, IATA | <p style="text-align: center;">UN1490</p> |
| <ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG, IATA | <p style="text-align: center;">1490 PERMANGANATE DE POTASSIUM,
DANGEREUX POUR L'ENVIRONNEMENT
POTASSIUM PERMANGANATE</p> |
| <ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR | <div style="display: flex; justify-content: space-around; align-items: center;">  </div> |
| <ul style="list-style-type: none"> · Classe · Étiquette | <p style="text-align: center;">5.1 Matières comburantes.
5.1</p> |
| <ul style="list-style-type: none"> · IMDG, IATA | <div style="display: flex; justify-content: center; align-items: center;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | <p style="text-align: center;">5.1 Matières comburantes.
5.1</p> |
| <ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA | <p style="text-align: center;">II</p> |

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· 14.5 Dangers pour l'environnement:	Matière dangereuse du point de vue de l'environnement, solide
· Marquage spécial (ADR):	Signe conventionnel (poisson et arbre)
· 14.6 Précautions particulières à prendre par l'utilisateur	Attention: Matières comburantes.
· Numéro d'identification du danger (Indice Kemler):	50
· No EMS:	5.1-06
· Segregation groups	Permanganates
· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR	
· Quantités limitées (LQ)	1 kg
· Quantités exceptées (EQ)	Code: E2 Quantité maximale nette par emballage intérieur: 30 g Quantité maximale nette par emballage extérieur: 500 g
· Catégorie de transport	2
· Code de restriction en tunnels	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· "Règlement type" de l'ONU:	UN 1490 PERMANGANATE DE POTASSIUM, 5.1, II, DANGEREUX POUR L'ENVIRONNEMENT

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** la substance n'est pas comprise
- **Catégorie SEVESO**
P8 LIQUIDES ET SOLIDES COMBURANTS
E1 Danger pour l'environnement aquatique
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 50 t**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 200 t**
- **Directive 2011/65/UE relative à la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques – Annexe II**
la substance n'est pas comprise
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

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RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· **Acronymes et abréviations:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Matières solides comburantes – Catégorie 2

Acute Tox. 4: Toxicité aiguë - voie orale – Catégorie 4

Repr. 2: Toxicité pour la reproduction – Catégorie 2

Aquatic Acute 1: Dangers pour le milieu aquatique- toxicité aiguë pour le milieu aquatique – Catégorie 1

Aquatic Chronic 1: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 1

FR

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 01.06.2021

überarbeitet am: 01.06.2021

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

· **1.1 Produktidentifikator**

· **Handelsname:** Kaliumpermanganat

· **Artikelnummer:** 20200

· **CAS-Nummer:**

7722-64-7

· **EG-Nummer:**

231-760-3

· **Indexnummer:**

025-002-00-9

· **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**

Keine weiteren relevanten Informationen verfügbar.

· **Verwendung des Stoffes / des Gemischs** Laborchemikalien

· **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**

· **Hersteller/Lieferant:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Science Services GmbH

Unterhachinger Str. 75

81737 München Germany

Tel: +49(0)89 18 93 668-0

safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org

Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h

· **Auskunftgebender Bereich:** Product safety department

· **1.4 Notrufnummer:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

· **2.1 Einstufung des Stoffs oder Gemischs**

· **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS03 Flamme über einem Kreis

Ox. Sol. 2

H272 Kann Brand verstärken; Oxidationsmittel.



GHS08 Gesundheitsgefahr

Repr. 2

H361d Kann vermutlich das Kind im Mutterleib schädigen.

(Fortsetzung auf Seite 2)

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GHS09 Umwelt

Aquatic Acute 1 H400 Sehr giftig für Wasserorganismen.

Aquatic Chronic 1 H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**
Der Stoff ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS03



GHS07



GHS08



GHS09

- **Signalwort Gefahr**
- **Gefahrenhinweise**
H272 Kann Brand verstärken; Oxidationsmittel.
H302 Gesundheitsschädlich bei Verschlucken.
H361d Kann vermutlich das Kind im Mutterleib schädigen.
H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.
- **Sicherheitshinweise**
P210 Von Hitze fernhalten. Nicht rauchen.
P220 Von Kleidung und anderen brennbaren Materialien fernhalten.
P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.
P301+P312 BEI VERSCHLUCKEN: Bei Unwohlsein GIFTINFORMATIONSZENTRUM/Arzt anrufen.
P405 Unter Verschluss aufbewahren.
P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.1 Chemische Charakterisierung: Stoffe**
- **CAS-Nr. Bezeichnung**
7722-64-7 Kaliumpermanganat
- **Identifikationsnummer(n)**
- **EG-Nummer:** 231-760-3
- **Indexnummer:** 025-002-00-9

DE

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ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

· Allgemeine Hinweise:

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

- **Nach Einatmen:** Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.
- **Nach Hautkontakt:** Im allgemeinen ist das Produkt nicht hautreizend.
- **Nach Augenkontakt:** Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.
- **Nach Verschlucken:** Sofort Arzt aufsuchen.

· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

· 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· 5.1 Löschmittel

- **Geeignete Löschmittel:** Feuerlöschmaßnahmen auf die Umgebung abstimmen.

· 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren

Keine weiteren relevanten Informationen verfügbar.

· 5.3 Hinweise für die Brandbekämpfung

- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.

· 6.2 Umweltschutzmaßnahmen:

Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

· 6.3 Methoden und Material für Rückhaltung und Reinigung:

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

· 6.4 Verweis auf andere Abschnitte

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

· 7.1 Schutzmaßnahmen zur sicheren Handhabung

Bei sachgemäßer Verwendung keine besonderen Maßnahmen erforderlich.

- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.

· 7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten

· Lagerung:

- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.

· **Zusammenlagerungshinweise:** Nicht erforderlich.

· **Weitere Angaben zu den Lagerbedingungen:** Keine.

· Lagerklasse:

- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** -

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· **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

· **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

· **8.1 Zu überwachende Parameter**

· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

7722-64-7 Kaliumpermanganat

AGW	Langzeitwert: 0,02A; 0,2E mg/m ³ 8(I);DFG,Y,10, 20
-----	--

· **Bestandteile mit biologischen Grenzwerten:**

7722-64-7 Kaliumpermanganat

BGW	20 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende Parameter: Mangan
-----	---

· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

· **8.2 Begrenzung und Überwachung der Exposition**

· **Persönliche Schutzausrüstung:**

· **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Vor den Pausen und bei Arbeitsende Hände waschen.

· **Atemschutz:** Nicht erforderlich.

· **Handschutz:**

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein.

Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:** Nicht erforderlich.

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

· **Form:** Kristallin

· **Farbe:** Nicht bestimmt.

· **Geruch:** Charakteristisch

· **Geruchsschwelle:** Nicht bestimmt.

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· pH-Wert:	Nicht anwendbar.
· Zustandsänderung	
· Schmelzpunkt/Gefrierpunkt:	>240 °C
· Siedebeginn und Siedebereich:	Nicht bestimmt.
· Flammpunkt:	Nicht anwendbar.
· Entzündbarkeit (fest, gasförmig):	Feuergefahr bei Berührung mit brennbaren Stoffen.
· Zersetzungstemperatur:	Nicht bestimmt.
· Selbstentzündungstemperatur:	Nicht bestimmt.
· Explosive Eigenschaften:	Das Produkt ist nicht explosionsgefährlich.
· Explosionsgrenzen:	
· Untere:	Nicht bestimmt.
· Obere:	Nicht bestimmt.
· Dampfdruck bei 20 °C:	0 hPa
· Dichte bei 20 °C:	2,703 g/cm ³
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht anwendbar.
· Verdampfungsgeschwindigkeit	Nicht anwendbar.
· Löslichkeit in / Mischbarkeit mit	
· Wasser bei 20 °C:	64,3 g/l
· Verteilungskoeffizient: n-Octanol/Wasser:	Nicht bestimmt.
· Viskosität:	
· Dynamisch:	Nicht anwendbar.
· Kinematisch:	Nicht anwendbar.
· 9.2 Sonstige Angaben	Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**
Gesundheitsschädlich bei Verschlucken.

· **Einstufungsrelevante LD/LC50-Werte:**

Oral	LD50	1.090 mg/kg (rat)
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- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität**
Kann vermutlich das Kind im Mutterleib schädigen.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Ökotoxische Wirkungen:**
- **Bemerkung:** Sehr giftig für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 3 (Listeneinstufung): stark wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.
Trinkwassergefährdung bereits beim Auslaufen geringster Mengen in den Untergrund.
In Gewässern auch giftig für Fische und Plankton.
sehr giftig für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

ABSCHNITT 14: Angaben zum Transport

- | | |
|--|--|
| · 14.1 UN-Nummer | |
| · ADR, IMDG, IATA | UN1490 |
| · 14.2 Ordnungsgemäße UN-Versandbezeichnung | |
| · ADR | 1490 KALIUMPERMANGANAT, UMWELTGEFÄHRDEND |

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· IMDG, IATA	POTASSIUM PERMANGANATE
· 14.3 Transportgefahrenklassen	
· ADR	
· Klasse	5.1 Entzündend (oxidierend) wirkende Stoffe
· Gefahrzettel	5.1
· IMDG, IATA	
· Class	5.1 Entzündend (oxidierend) wirkende Stoffe
· Label	5.1
· 14.4 Verpackungsgruppe	
· ADR, IMDG, IATA	II
· 14.5 Umweltgefahren:	Umweltgefährdender Stoff, fest
· Besondere Kennzeichnung (ADR):	Symbol (Fisch und Baum)
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender	Achtung: Entzündend (oxidierend) wirkende Stoffe
· Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl):	50
· EMS-Nummer:	5.1-06
· Segregation groups	Permanganates
· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	Nicht anwendbar.
· Transport/weitere Angaben:	
· ADR	
· Begrenzte Menge (LQ)	1 kg
· Freigestellte Mengen (EQ)	Code: E2 Höchste Nettomenge je Innenverpackung: 30 g Höchste Nettomenge je Außenverpackung: 500 g
· Beförderungskategorie	2
· Tunnelbeschränkungscode	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

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überarbeitet am: 01.06.2021

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· **UN "Model Regulation":** UN 1490 KALIUMPERMANGANAT, 5.1, II,
UMWELTGEFÄHRDEND

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Der Stoff ist nicht enthalten.
- **Seveso-Kategorie**
P8 ENTZÜNDEND (OXIDIEREND) WIRKENDE FLÜSSIGKEITEN UND FESTSTOFFE
E1 Gewässergefährdend
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 50 t**
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 200 t**
- **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**
Der Stoff ist nicht enthalten.
- **Nationale Vorschriften:**
- **Technische Anleitung Luft:**

Klasse	Anteil in %
III	100,0
- **Wassergefährdungsklasse: WGK 3 (Listeneinstufung): stark wassergefährdend.**
- **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**
Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe
- **15.2 Stoffsicherheitsbeurteilung: Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.**

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Abkürzungen und Akronyme:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidierende Feststoffe – Kategorie 2
Acute Tox. 4: Akute Toxizität - oral – Kategorie 4
Repr. 2: Reproduktionstoxizität – Kategorie 2
Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1
Aquatic Chronic 1: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 1

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 01.06.2021

Revisione: 01.06.2021

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Permanganato di potassio

· **Articolo numero:** 20200

· **Numero CAS:**

7722-64-7

· **Numeri CE:**

231-760-3

· **Numero indice:**

025-002-00-9

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**

Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS03 fiamma su cerchio

Ox. Sol. 2 H272 Può aggravare un incendio; comburente.



GHS08 pericolo per la salute

Repr. 2 H361d Sospettato di nuocere al feto.



GHS09 ambiente

Aquatic Acute 1 H400 Molto tossico per gli organismi acquatici.

Aquatic Chronic 1 H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.

(continua a pagina 2)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 01.06.2021

Revisione: 01.06.2021

Denominazione commerciale: Permanganato di potassio

(Segue da pagina 1)



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

La sostanza è classificata ed etichettata conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS03

GHS07

GHS08

GHS09

· **Avvertenza Pericolo**

· **Indicazioni di pericolo**

H272 Può aggravare un incendio; comburente.

H302 Nocivo se ingerito.

H361d Sospettato di nuocere al feto.

H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.

· **Consigli di prudenza**

P210 Tenere lontano da fonti di calore. Non fumare.

P220 Tenere lontano da indumenti e altri materiali combustibili.

P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.

P301+P312 IN CASO DI INGESTIONE: in presenza di malessere, contattare un CENTRO ANTIVELENI/un medico.

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.1 Caratteristiche chimiche: Sostanze**

· **Numero CAS**

7722-64-7 Permanganato di potassio

· **Numerofi di identificazione**

· **Numeri CE:** 231-760-3

· **Numero indice:** 025-002-00-9

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:** Portare in zona ben areata, in caso di disturbi consultare il medico.

· **Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.

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- **Contatto con gli occhi:** Lavare con acqua corrente per alcuni minuti tenendo le palpebre ben aperte.
- **Ingestione:** Chiamare subito il medico.
- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**
Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.
- **6.2 Precauzioni ambientali:**
In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.
Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Smaltimento del materiale contaminato conformemente al punto 13.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura** Per un uso corretto non sono necessari provvedimenti particolari.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Nessuno.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

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VL	Valore a lungo termine: 0,2* 0,05** mg/m ³ Cute; * frazione inalabile **respirabile; come Mn
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- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

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- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**
Tenere lontano da cibo, bevande e foraggi.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- **Maschera protettiva:** Non necessario.
- **Guanti protettivi:**
Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.
A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.
Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.
- **Materiale dei guanti**
La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro.
- **Tempo di permeazione del materiale dei guanti**
Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.
- **Occhiali protettivi:** Non necessario.

SEZIONE 9: Proprietà fisiche e chimiche

- **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**
- **Indicazioni generali**
- **Aspetto:**
- **Forma:** Cristallino
- **Colore:** Non definito.
- **Odore:** Caratteristico
- **Soglia olfattiva:** Non definito.
- **valori di pH:** Non applicabile.
- **Cambiamento di stato**
- **Punto di fusione/punto di congelamento:** >240 °C
- **Punto di ebollizione iniziale e intervallo di ebollizione:** Non definito.
- **Punto di infiammabilità:** Non applicabile.
- **Infiammabilità (solidi, gas):** Può provocare l'accensione di materie combustibili.
- **Temperatura di decomposizione:** Non definito.
- **Temperatura di autoaccensione:** Non definito.
- **Proprietà esplosive:** Prodotto non esplosivo.
- **Limiti di infiammabilità:**
- **Inferiore:** Non definito.
- **Superiore:** Non definito.
- **Tensione di vapore a 20 °C:** 0 hPa
- **Densità a 20 °C:** 2,703 g/cm³
- **Densità relativa** Non definito.
- **Densità di vapore:** Non applicabile.
- **Velocità di evaporazione** Non applicabile.

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· Solubilità in/Miscibilità con · acqua a 20 °C:	64,3 g/l
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità:	
· Dinamica:	Non applicabile.
· Cinematica:	Non applicabile.
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**
Nocivo se ingerito.

- **Valori LD/LC50 rilevanti per la classificazione:**

Orale	LD50	1.090 mg/kg (rat)
-------	------	-------------------

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Sensibilizzazione respiratoria o cutanea**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione**
Sospettato di nuocere al feto.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.

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- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:** Molto tossico per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 3 (D) (Classif. secondo le liste): molto pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di quantità minime di prodotto.
Tossico per pesci e plancton.
Molto tossico per gli organismi acquatici
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|--|
| · 14.1 Numero ONU | |
| · ADR, IMDG, IATA | UN1490 |
| · 14.2 Nome di spedizione dell'ONU | |
| · ADR | 1490 PERMANGANATO DI POTASSIO, PERICOLOSO PER L'AMBIENTE |
| · IMDG, IATA | POTASSIUM PERMANGANATE |
| · 14.3 Classi di pericolo connesso al trasporto | |
| · ADR | |
|  | |
| · Classe | 5.1 Materie comburenti |
| · Etichetta | 5.1 |
| · IMDG, IATA | |
|  | |
| · Class | 5.1 Materie comburenti |
| · Label | 5.1 |

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· 14.4 Gruppo di imballaggio · ADR, IMDG, IATA	II
· 14.5 Pericoli per l'ambiente: · Marcatura speciali (ADR):	<i>Materia pericolosa dal punto di vista dell'ambiente, solida</i> <i>Simbolo (pesce e albero)</i>
· 14.6 Precauzioni speciali per gli utilizzatori · N° identificazione pericolo (Numero Kemler): · Numero EMS: · Segregation groups · Stowage Category · Segregation Code	<i>Attenzione: Materie comburenti</i> 50 5.1-06 <i>Permanganates</i> D <i>SG38 Stow "separated from" SGG2-ammonium compounds.</i> <i>SG49 Stow "separated from" SGG6-cyanides</i> <i>SG60 Stow "separated from" SGG16-peroxides</i>
· 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC	<i>Non applicabile.</i>
· Trasporto/ulteriori indicazioni:	
· ADR · Quantità limitate (LQ) · Quantità esenti (EQ)	1 kg Codice: E2 <i>Quantità massima netta per imballaggio interno: 30 g</i> <i>Quantità massima netta per imballaggio esterno: 500 g</i>
· Categoria di trasporto · Codice di restrizione in galleria	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 <i>Maximum net quantity per inner packaging: 30 g</i> <i>Maximum net quantity per outer packaging: 500 g</i>
· UN "Model Regulation":	UN 1490 PERMANGANATO DI POTASSIO, 5.1, II, PERICOLOSO PER L'AMBIENTE

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** La sostanza non è contenuta
- **Categoria Seveso**
P8 LIQUIDI E SOLIDI COMBURENTI
E1 Pericoloso per l'ambiente acquatico
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 50 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**
- **Direttiva 2011/65/UE sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche - Allegato II**
La sostanza non è contenuta
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

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SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· Abbreviazioni e acronimi:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Solidi comburenti – Categoria 2

Acute Tox. 4: Tossicità acuta per via orale – Categoria 4

Repr. 2: Tossicità per la riproduzione – Categoria 2

Aquatic Acute 1: Pericoloso per l'ambiente acquatico - pericolo acuto per l'ambiente acquatico – Categoria 1

Aquatic Chronic 1: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 1

IT

물질안전보건자료

GHS에 따라라따

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

(1 쪽부터계속)



환경

수생환경 유해성 - 급성 1 H400 수생생물에 매우 유독함
 수생환경 유해성 - 만성1 H410 장기적 영향에 의해 수생생물에 매우 유독함



급성 독성 - 경구 - 구분 4 H302 삼키면 유해함

- 라벨 표기 요소요소
- 라벨 라벨 요소
- 그림문자

본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.



GHS03 GHS07 GHS08 GHS09

- 신호어 위험
- 유해 유해 유해 유해 문구
- 화재를 강렬하게 함; 산화제
- 삼키면 유해함
- 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
- 장기적 영향에 의해 수생생물에 매우 유독함

- 예방 조치 문구문구
- 열기와 가까이 하지 마세요. - 금연.
- 의류·가연성 물질로부터 격리·보관하시오.
- 가연성 물질과 혼합되지 않도록 조치하시오.
- 보호장갑·보호의·보안경·안면보호구를 착용하시오.
- 삼켰을 시: 몸에 이상이 있을 시 독성물질 센터/병원 연락 필요.
- (지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하시오.

기타기타 유해성

- PBT(잔류성, 생물농축성, 물질물질물질) vPvB(고 잔류성, 고 생물농축성 물질물질)에 해당하지 않음.
- PBT(잔류성, 생물농축성, 물질물질물질) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질물질물질) 당사항 없음.

3 구성성분의 명칭 및 함유량

- 화학적 특성: 화학물질
- CAS-번호표시
7722-64-7 Potassium Permanganate, Reagent, A.C.S.
- 식별식별 식별식
- EC 의번호: 231-760-3
- 색인색인 식별식: 025-002-00-9

KR

(3 쪽에계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

(2 쪽부터 계속)

4 응급조치 요령

- **응급조치요령 내용내용**
- **일반적 정보정보**
중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.
- **흡입했을 때:** 신선한 공기를 쐬고, 통증이 있을 때는 의료진의 도움을 구한다.
- **피부에 접촉했을 때:** 일반적으로 이 제품은 피부에 자극적이지 않다.
- **눈에 눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어낸다.
- **먹었을 때:** 즉시 의사의 도움을 구한다.
- **기타 기타 사항의 주의사항:**
가장 가장 중요한 응급조치요령에 영향을 미치는 정보가 존재하지 않습니다.
· **즉각적인 의료처리 및 특별처리가 필요함을 시사하는 징후 징후**가 존재하지 않습니다.

5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:** 주변 환경에 맞는 화재 진화 방법을 사용한다.
- **본 화학물질이나 혼합물에서 발생 시 특별한 주의 사항** 추가적인 정보가 존재하지 않습니다.
- **소방관에게 대한 신고 사항**
- **화재 화재 예방 및 안전 조치:** 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급 처치 절차 필요 없음.**
- **환경 환경 관련 예방 조치:**
하천이나 하수도로 유입되었을 경우 해당 관청에 보고한다.
하수도망/하수면 위 의 물/지하수로 도달하지 않게 한다.
- **밀폐 밀폐 용기 청소 및 폐기:** 폐기물 13에 따라 오염된 물질을 쓰레기로 처분한다.
- **추가 예방 조치 참조**
안전 관리에 대한 정보는 제 7 장 을 참고하시오.
개인 보호 장비에 대한 정보는 제 8 장 을 참고하시오.
쓰레기 처리에 대한 정보는 제 13 장 을 참고하시오.

7 취급 및 저장방법

- **취급 취급 취급**
안전 안전을 위한 예방 조치 올바르게 사용할 경우에는 특별한 주의가 필요없다.
화재 화재 예방 및 안전 조치에 관한 정보 특별한 조치가 필요없음.
- **혼합 위험성 및 안전 예방 조치 조건**
- **보관 보관 보관**
· **안전한 저장 방법** 특별한 요구 사항이 없음.
· **하수도 방류 방류 및 폐기**에 대한 특별한 주의 사항 없음
· **보관 조건에 관한 추가 정보 없음**
· **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- **첨단 시설 디자인에 대한 추가 정보:** 더 이상 의 자료는 없음. 항목 7 을 참고하시오.

(4 쪽에 계속)

물질안전보건자료

GHS에 따라 라다

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

(3 쪽부터 계속)

통제 용어 통제 번호

· 화학물질의 노출기준, 생물학적 노출기준 등:	
7722-64-7 Potassium Permanganate, Reagent, A.C.S.	
TLV (KR)	장기간의값: 1 mg/m ³ as Mn
IOELV (EU)	장기간의값: 0.2* 0.05** mg/m ³ as Mn; *inhalable, **respirable fraction
PEL (US)	최고노출기준: 5 mg/m ³ as Mn
REL (US)	단기간의값: 3 mg/m ³ 장기간의값: 1 mg/m ³ as Mn
TLV (US)	장기간의값: 0.02* 0.1** mg/m ³ as Mn; *respirable **inhalable fraction

· **추천정보** 정보 조 할 당시에 유효한 목록을 기초로 사용했다.

노출 통제 통제 통제

개인 개인 개인

· **일반적 보호 조치 및 위생 조치:**

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
· 휴식 전이나 작업이 끝날 때마다 손을 씻는다.

· **호흡기 보호** 필요 없음.

눈 보호

· 장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다.
· 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.
· 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑 의재**

· 적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업자에 따라서도 다르게 선정되어야 한다.

· **장갑 재료의 투과 시간** 정확한 관통 시간은 보호 장갑 제조자에 의하여 인지되고, 준수되어야 한다.

· **보호** 필요 없음.

9 물리화학적 특성

기본 정보 물리화학적 특성에 대한 정보

· **일반 정보**

· **외형**

· **물리적 상태** : 수정

· **색** : 알맞지 않다.

· **냄새**

· **후각** : 특색있는

· **pH** : 알맞지 않다.

· **상태 변화**

· **녹는 점/어는 점** : >240 °C

· **초기 녹는 점과 끓는점 범위** : 맞지 않는다.

· **인화점** : 해당 사항 없음.

· **인화성 고체** : 가연성 물질과 접촉할 경우의 화재 위험

(5 쪽에 계속)

물질안전보건자료 GHS에 따라라다

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

(5 쪽부터계속)

12 환경에 미치는 영향

독성독성독성

- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **생태독성:**

의견의견의견류 에 매우 독성임

- **추가적인 생태학 정보정보**

일반 열안정성특징

수질오염등급 3 (목록분류): 심하게수질오염이된
 지하수나, 하천으로또는 하수도망에도달하지않게한다. 역시극소수의양이라도안된다.
 지하수로아주미세한양이유입되었을경우엔이미식수오염상태이다
 하천에서는역시물고기나플랑크톤게는독성이있다.
 물속의유기체에아주독이되는것

- **PBT(잔류성, 생물농축성, 물질독성) 및 vPvB(고 잔류성, 고 생물농축성) 물질인 경우 결과**
- **PBT(잔류성, 생물농축성, 물질독성) 물질인 경우** 당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성) 물질인 경우** 당사항 없음.

기타기타 부대용 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리방법**

권고 권고 권고 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.

- **비위생적 포장포장**

권고 권고 권고 의지침에입각한쓰레기처리.

14 운송에 필요한 정보

유엔 유엔 유엔 번호

- **ADR, IMDG, IATA** UN1490

적정적정적정명

- **ADR** 1490 POTASSIUM PERMANGANATE, ENVIRONMENTALLY HAZARDOUS
- **IMDG, IATA** POTASSIUM PERMANGANATE

교통 교통 교통 위험 클래스

- **ADR**



등급등급등급

5.1 인화성이 (산화하는) 있는것에영향을주는물질

(7 쪽에계속)

물질안전보건자료


GHS에 따라라따

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

(6 쪽부터계속)

<ul style="list-style-type: none"> · 위험물라벨라벨 	5.1
<ul style="list-style-type: none"> · IMDG, IATA 	
	
<ul style="list-style-type: none"> · Class · Label 	5.1 인화성이 (산화하는) 있는것에영향을주는물질 5.1
<ul style="list-style-type: none"> · 용기등급 · ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · 환경적 유해물질: 	이물질은환경을오염시킨다
<ul style="list-style-type: none"> · 특수 취급사항(환경): 	심벌 (물고기와 나무)
<ul style="list-style-type: none"> · 이물질 특별 취급 조치 	경고: 인화성이 (산화하는) 있는것에영향을주는물질
<ul style="list-style-type: none"> · 위험물 라벨 코드 · E 번호 번호 · Segregation groups · Stowage Category · Segregation Code 	50 5.1-06 Permanganates D SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
<ul style="list-style-type: none"> · MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따라 	해당사항 없음.
<ul style="list-style-type: none"> · 운송/추가정보 	
<ul style="list-style-type: none"> · ADR 	
<ul style="list-style-type: none"> · 한정량(수량 제한) · Excepted quantities (EQ) 	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
<ul style="list-style-type: none"> · 운송 용기 구분 · 터널 제한 사항 코드 	2 E
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
<ul style="list-style-type: none"> · UN 번호 및 위험성 	UN 1490 POTASSIUM PERMANGANATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

15 법적 규제현황

- 산업안전보건법에 의해 규제
- 제조제한물질: 성분이포함되어있지않다
- 허가대상물질: 성분이포함되어있지않다
- 관리대상유해물질: 성분이포함되어있지않다
- 작업환경측정 대상 유해인자 1B4

(8 쪽에계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

(7 쪽부터 계속)

· **특수건강잠망 대상유해인자 1B4**
해당 해당 **순물질** 또는 **모순물**에 대한 **미국안전재정국화학물질관리법**

· Korean Existing Chemical Inventory KE-29180

· **화학물질관리법**

· **사고대비물질** 성분이 포함되어 있다

· **금지물질** 성분이 포함되어 있지 않다

· **제한물질** 성분이 포함되어 있지 않다

· **유독물질** 성분이 포함되어 있지 않다

· **허가물질** 성분이 포함되어 있다

· **위험물안전관리법 (위험물 및 지정수량) 제 1: 1,000 킬로그램**
등록 **등락물질** 또는 **선제대상 화학물질** 성분이 포함되어 있지 않다

· '21년까지 등록하여야 할 암, 돌연변이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 **오존화학물질** 성분이 포함되어 있지 않다

· **중점관리물질 지정지정**

· **표1 중점관리물질(제관제관 관련관영분)** 이 포함되어 있지 않다

· **표2 중점관리물질(제관제관 관련관영분)** 이 포함되어 있지 않다

· **대형화학물질** 요소

본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· **그림문자**



GHS03

GHS07

GHS08

GHS09

· **신호어 위험**
유해 **유해위험** 문구

화재를 강렬하게 함; 산화제

삼키면 유해함

태아 또는 생식능력에 손상을 일으킬 것으로 의심됨

장기적 영향에 의해 수생생물에 매우 유독함

· **예방 조차** 문구 문구

열기와 가까이 하지 마세요. - 금연.

의류·가연성 물질로부터 격리·보관하십시오.

가연성 물질과 혼합되지 않도록 조치하십시오.

보호장갑·보호의·보안경·안면보호구를 착용하십시오.

삼켰을 시: 몸에 이상이 있을 시 독성물질 센터/병원 연락 필요.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

· **화학물질 안전성 평가** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘 날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

최초 **최초 작성** 일자: 2021.06.01

개정 **개정** 일자: 1 / 2021.06.01

· **약어와 두문자어:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

(9 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2021.06.01

개정: 2021.06.01

제품명: Potassium Permanganate, Reagent, A.C.S.

PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

(8 쪽부터계속)

Ficha de dados de segurança
em conformidade com 1907/2006/CE, Artigo 31º

data da impressão 01.06.2021

Revisão: 01.06.2021

SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** permanganato de potássio
- **Código do produto:** 20200
- **Nº CAS:**
7722-64-7
- **Número CE:**
231-760-3
- **Número de índice:**
025-002-00-9
- **1.2 Utilizações identificadas relevantes da substância ou mistura e utilizações desaconselhadas**
Não existe mais nenhuma informação relevante disponível.
- **Utilização da substância / da preparação** Químicos de laboratório
- **1.3 Identificação do fornecedor da ficha de dados de segurança**
- **Fabricante/fornecedor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Entidade para obtenção de informações adicionais:** Product safety department
- **1.4 Número de telefone de emergência:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECÇÃO 2: Identificação dos perigos

- **2.1 Classificação da substância ou mistura**
- **Classificação em conformidade com o Regulamento (CE) n.º 1272/2008**



GHS03 chama sobre círculo

Ox. Sol. 2 H272 Pode agravar incêndios; comburente.



GHS08 perigo para a saúde

Repr. 2 H361d Suspeito de afectar o nascituro.



GHS09 ambiente

Aquatic Acute 1 H400 Muito tóxico para os organismos aquáticos.

Aquatic Chronic 1 H410 Muito tóxico para os organismos aquáticos com efeitos duradouros.



GHS07

Acute Tox. 4 H302 Nocivo por ingestão.

(continuação na página 2)

Ficha de dados de segurança

em conformidade com 1907/2006/CE, Artigo 31º

data da impressão 01.06.2021

Revisão: 01.06.2021

Nome comercial: permanganato de potássio

(continuação da página 1)

- **2.2 Elementos do rótulo**
- **Rotulagem em conformidade com o Regulamento (CE) n.º 1272/2008**
A substância classificou-se e está etiquetado em conformidade com o regulamento CLP.
- **Pictogramas de perigo**



GHS03 GHS07 GHS08 GHS09

- **Palavra-sinal Perigo**
- **Advertências de perigo**
H272 *Pode agravar incêndios; comburente.*
H302 *Nocivo por ingestão.*
H361d *Suspeito de afectar o nascituro.*
H410 *Muito tóxico para os organismos aquáticos com efeitos duradouros.*
- **Recomendações de prudência**
P210 *Manter afastado do calor. - Não fumar.*
P220 *Manter afastado da roupa e de outras matérias combustíveis.*
P280 *Usar luvas de protecção/vestuário de protecção/protecção ocular/protecção facial.*
P301+P312 **EM CASO DE INGESTÃO: caso sinta indisposição, contacte um CENTRO DE INFORMAÇÃO ANTIVENENOS/médico.**
P405 *Armazenar em local fechado à chave.*
P501 *Eliminar o conteúdo/recipiente de acordo com a legislação local/regional/nacional/internacional.*
- **2.3 Outros perigos**
- **Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.

SECÇÃO 3: Composição/informação sobre os componentes

- **3.1 Caracterização química: Substâncias**
- **Designação CAS n.º**
7722-64-7 permanganato de potássio
- **Número(s) de identificação**
- **Número CE:** 231-760-3
- **Número de índice:** 025-002-00-9

SECÇÃO 4: Medidas de primeiros socorros

- **4.1 Descrição das medidas de primeiros socorros**
- **Indicações gerais:**
Os sintomas de envenenamento podem surgir apenas após várias horas, por isso é necessária vigilância médica pelo menos 48 horas após o acidente.
- **Em caso de inalação:** *Entrada de ar fresco; em caso de queixas consultar o médico.*
- **Em caso de contacto com a pele:** *Em geral o produto não é irritante para a pele.*
- **Em caso de contacto com os olhos:**
Enxaguar os olhos durante alguns minutos sob água corrente, mantendo as pálpebras abertas.
- **Em caso de ingestão:** *Consultar imediatamente o médico*
- **4.2 Sintomas e efeitos mais importantes, tanto agudos como retardados**
Não existe mais nenhuma informação relevante disponível.

(continuação na página 3)

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- **4.3 Indicações sobre cuidados médicos urgentes e tratamentos especiais necessários**
Não existe mais nenhuma informação relevante disponível.

SECÇÃO 5: Medidas de combate a incêndios

- **5.1 Meios de extinção**
- **Meios adequados de extinção:** Coordenar no local medidas para extinção do fogo.
- **5.2 Perigos especiais decorrentes da substância ou mistura**
Não existe mais nenhuma informação relevante disponível.
- **5.3 Recomendações para o pessoal de combate a incêndios**
- **Equipamento especial de protecção:** Não são necessárias medidas especiais.

SECÇÃO 6: Medidas a tomar em caso de fugas accidentais

- **6.1 Precauções individuais, equipamento de protecção e procedimentos de emergência** Não necessário.
- **6.2 Precauções a nível ambiental:**
Em caso de infiltrações nos leitos de água ou na canalização, comunicar aos serviços públicos competentes.
Evitar que penetre na canalização / águas superficiais / águas subterrâneas.
- **6.3 Métodos e materiais de confinamento e limpeza:**
Eliminar residualmente as substâncias contaminadas como um resíduo segundo o Ponto 13.
- **6.4 Remissão para outras secções**
Para informações sobre uma manipulação segura, ver o capítulo 7.
Para informações referentes ao equipamento de protecção individual, ver o capítulo 8.
Para informações referentes à eliminação residual, ver o capítulo 13.

SECÇÃO 7: Manuseamento e armazenagem

- **7.1 Precauções para um manuseamento seguro**
Em caso de utilização correcta, não são necessárias medidas especiais.
- **Precauções para prevenir incêndios e explosões:** Não são necessárias medidas especiais.
- **7.2 Condições de armazenagem segura, incluindo eventuais incompatibilidades**
- **Armazenagem:**
- **Requisitos para espaços ou contentores para armazenagem:** Sem requisitos especiais.
- **Avisos para armazenagem conjunta:** Não necessário.
- **Outros avisos sobre as condições de armazenagem:** Nenhum.
- **7.3 Utilização(ões) final(is) específica(s)** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 8: Controlo da exposição/Protecção individual

- **Indicações adicionais para concepção de instalações técnicas:** Não existem outras informações, ver ponto 7.
- **8.1 Parâmetros de controlo**

· **Componentes cujo valor do limite de exposição no local de trabalho deve ser monitorizado:**

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VLE	Valor para exposição longa: 0,1 (0,02*) mg/m ³ *respirável; A4; Afeção do SNC; em Mn
-----	--

- **Indicações adicionais:** Foram utilizadas como base as listas válidas à data da elaboração.

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- **8.2 Controlo da exposição**
- **Equipamento de protecção individual:**
- **Medidas gerais de protecção e higiene:**
Manter afastado de alimentos, bebidas e forragens.
Lavar as mãos antes das pausas e no fim do trabalho.
- **Protecção respiratória:** Não necessário.
- **Protecção das mãos:**
O material das luvas tem de ser impermeável e resistente ao produto / à substância / preparação.
Uma vez que não foram realizados testes nesta área, não podemos recomendar um determinado tipo de material para as luvas que seja adequado para o produto / a preparação / a mistura de químicos.
Escolher o material das luvas tendo em consideração a durabilidade, a permeabilidade e a degradação.
- **Material das luvas**
A escolha das luvas mais adequadas não depende apenas do material, mas também de outras características qualitativas e varia de fabricante para fabricante.
- **Tempo de penetração no material das luvas**
Deve informar-se sobre a validade exacta das suas luvas junto do fabricante e respeitá-la.
- **Protecção dos olhos:** Não necessário.

SECÇÃO 9: Propriedades físico-químicas

- **9.1 Informações sobre propriedades físicas e químicas de base**
- **Informações gerais**
- **Aspetto:**
- **Forma:** Cristalino
- **Cor:** Não determinado.
- **Odor:** Característico
- **Limiar olfactivo:** Não determinado.
- **valor pH:** Não aplicável.
- **Mudança do estado:**
- **Ponto de fusão/ponto de congelação:** >240 °C
- **Ponto de ebulição inicial e intervalo de ebulição:** Não determinado.
- **Ponto de inflamação:** Não aplicável.
- **Inflamabilidade (sólido, gás):** Favorece a inflamação de matérias combustíveis.
- **Temperatura de decomposição:** Não determinado.
- **Temperatura de autoignição:** Não determinado.
- **Propriedades explosivas:** O produto não corre o risco de explosão.
- **Limites de explosão:**
- **Inferior:** Não determinado.
- **Superior:** Não determinado.
- **Pressão de vapor em 20 °C:** 0 hPa
- **Densidade em 20 °C:** 2,703 g/cm³
- **Densidade relativa** Não determinado.
- **Densidade de vapor** Não aplicável.
- **Taxa de evaporação:** Não aplicável.
- **Solubilidade em / miscibilidade com**
- **água em 20 °C:** 64,3 g/l

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- | | |
|---|--|
| · Coefficiente de partição: n-octanol/água | Não determinado. |
| · Viscosidade: | |
| · Dinâmico: | Não aplicável. |
| · Cinemático: | Não aplicável. |
| · 9.2 Outras informações | Não existe mais nenhuma informação relevante disponível. |

SECÇÃO 10: Estabilidade e reactividade

- **10.1 Reactividade** Não existe mais nenhuma informação relevante disponível.
- **10.2 Estabilidade química**
- **Decomposição térmica / condições a evitar:** Não existe decomposição se usado de acordo com as especificações.
- **10.3 Possibilidade de reações perigosas** Não se conhecem reações perigosas.
- **10.4 Condições a evitar** Não existe mais nenhuma informação relevante disponível.
- **10.5 Materiais incompatíveis:** Não existe mais nenhuma informação relevante disponível.
- **10.6 Produtos de decomposição perigosos:** Não se conhecem produtos de decomposição perigosos.

SECÇÃO 11: Informação toxicológica

- **11.1 Informações sobre os efeitos toxicológicos**
- **Toxicidade aguda**
Nocivo por ingestão.

- **Valores LD/LC50 relevantes para a classificação:**

por via oral	LD50	1.090 mg/kg (rat)
--------------	------	-------------------

- **Efeito de irritabilidade primário:**
- **Corrosão/irritação cutânea** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Lesões oculares graves/irritação ocular**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Sensibilização respiratória ou cutânea**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Efeitos CMR (carcinogenicidade, mutagenicidade e efeitos tóxicos na reprodução)**
- **Mutagenicidade em células germinativas**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Carcinogenicidade** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade reprodutiva**
Suspeito de afectar o nascituro.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição única**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição repetida**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Perigo de aspiração** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

SECÇÃO 12: Informação ecológica

- **12.1 Toxicidade**
- **Toxicidade aquática:** Não existe mais nenhuma informação relevante disponível.
- **12.2 Persistência e degradabilidade** Não existe mais nenhuma informação relevante disponível.
- **12.3 Potencial de bioacumulação** Não existe mais nenhuma informação relevante disponível.
- **12.4 Mobilidade no solo** Não existe mais nenhuma informação relevante disponível.

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- **Efeitos ecotóxicos:**
- **Observação:** Muito tóxico para os peixes.
- **Outras indicações ecológicas:**
- **Indicações gerais:**
Classe de perigo para a água 3 (D) (classificação pelas listas): muito perigoso para a água
Não deixar chegar às águas subterrâneas, aos cursos de água nem à canalização, nem em pequenas quantidades.
Perigo de poluição da água potável mesmo se forem derramadas quantidades muito pequenas no subsolo.
Tóxico nas águas para os peixes e para o plâncton.
muito tóxico para os organismos aquáticos
- **12.5 Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.
- **12.6 Outros efeitos adversos** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 13: Considerações relativas à eliminação

- **13.1 Métodos de tratamento de resíduos**
- **Recomendação:** Não se pode eliminar juntamente com o lixo doméstico. Não permita que chegue à canalização.
- **Embalagens contaminadas:**
- **Recomendação:** Eliminação residual conforme o regulamento dos serviços públicos.

SECÇÃO 14: Informações relativas ao transporte

- | | |
|---|---|
| · 14.1 Número ONU | |
| · ADR, IMDG, IATA | UN1490 |
| · 14.2 Designação oficial de transporte da ONU | |
| · ADR | 1490 PERMANGANATO DE POTÁSSIO, PERIGOSO PARA O AMBIENTE |
| · IMDG, IATA | POTASSIUM PERMANGANATE |
| · 14.3 Classes de perigo para efeitos de transporte | |
| · ADR | |
|  | |
| · Classe | 5.1 Matérias comburentes |
| · Rótulo | 5.1 |
| · IMDG, IATA | |
|  | |
| · Class | 5.1 Matérias comburentes |
| · Label | 5.1 |
| · 14.4 Grupo de embalagem | |
| · ADR, IMDG, IATA | II |
| · 14.5 Perigos para o ambiente: | Matéria perigosa do ponto de vista do ambiente, sólida |

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· Marcação especial (ADR):	Símbolo convencional (peixes e árvore)
· 14.6 Precauções especiais para o utilizador	Atenção: Matérias comburentes
· Número de identificação de perigo (Nº Kemler):	50
· Nº EMS:	5.1-06
· Segregation groups	Permanganates
· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· 14.7 Transporte a granel em conformidade com o anexo II da Convenção MARPOL e o Código IBC	Não aplicável.
· Transporte/outras informações:	
· ADR	
· Quantidades Limitadas (LQ)	1 kg
· Quantidades exceptuadas (EQ)	Código: E2 Quantidade líquida máxima por embalagem interior: 30 g Quantidade líquida máxima por embalagem exterior: 500 g
· Categoria de transporte	2
· Código de restrição em túneis	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1490 PERMANGANATO DE POTÁSSIO, 5.1, II, PERIGOSO PARA O AMBIENTE

SECÇÃO 15: Informação sobre regulamentação

- **15.1 Regulamentação/legislação específica para a substância ou mistura em matéria de saúde, segurança e ambiente**
- **Diretiva 2012/18/UE**
- **Substâncias perigosas designadas - ANEXO I** A substância não está listada.
- **Categoria "Seveso"**
P8 LÍQUIDOS E SÓLIDOS COMBURENTES
E1 Perigoso para o ambiente aquático
- **Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível inferior** 50 t
- **Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível superior** 200 t
- **Directiva 2011/65/UE relativa à restrição do uso de determinadas substâncias perigosas em equipamentos eléctricos e electrónicos - Anexo II**
A substância não está listada.
- **15.2 Avaliação da segurança química:** Não foi realizada nenhuma Avaliação de Segurança Química.

SECÇÃO 16: Outras informações

As informações fornecidas baseiam-se no estado actual dos nossos conhecimentos, embora não representem uma garantia das propriedades do produto e não fundamentam uma relação contratual.

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· Abreviaturas e acrónimos:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Sólidos comburentes – Categoria 2

Acute Tox. 4: Toxicidade aguda - via oral – Categoria 4

Repr. 2: Toxicidade reprodutiva – Categoria 2

Aquatic Acute 1: Perigoso para o ambiente aquático - perigo agudo para o ambiente aquático – Categoria 1

Aquatic Chronic 1: Perigoso para o ambiente aquático - perigo de longo prazo para o ambiente aquático – Categoria 1

PT

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SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** Permanganato de potasio

· **Número del artículo:** 20200

· **Número CAS:**

7722-64-7

· **Número CE:**

231-760-3

· **Número de clasificación:**

025-002-00-9

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· **1.3 Datos del proveedor de la ficha de datos de seguridad**

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· **1.4 Teléfono de emergencia:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· **2.1 Clasificación de la sustancia o de la mezcla**

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS03 llama sobre un círculo

Ox. Sol. 2

H272 Puede agravar un incendio; comburente.



GHS08 peligro para la salud

Repr. 2

H361d Se sospecha que daña al feto.



GHS09 medio ambiente

Aquatic Acute 1 H400 Muy tóxico para los organismos acuáticos.

Aquatic Chronic 1 H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

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GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.

· 2.2 Elementos de la etiqueta

· Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

La sustancia se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· Pictogramas de peligro



GHS03

GHS07

GHS08

GHS09

· Palabra de advertencia Peligro

· Indicaciones de peligro

H272 Puede agravar un incendio; comburente.

H302 Nocivo en caso de ingestión.

H361d Se sospecha que daña al feto.

H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· Consejos de prudencia

P210 Mantener alejado de fuentes de calor. - No fumar.

P220 Mantener alejado de la ropa y otros materiales combustibles.

P280 Llevar guantes/prendas/gafas/máscara de protección.

P301+P312 EN CASO DE INGESTIÓN: Llamar a un CENTRO DE TOXICOLOGÍA/médico si la persona se encuentra mal.

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· 2.3 Otros peligros

· Resultados de la valoración PBT y mPmB

· PBT: No aplicable.

· mPmB: No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· 3.1 Caracterización química: Sustancias

· Denominación N° CAS

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· Número(s) de identificación

· Número CE: 231-760-3

· Número de clasificación: 025-002-00-9

SECCIÓN 4: Primeros auxilios

· 4.1 Descripción de los primeros auxilios

· Instrucciones generales:

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· En caso de inhalación del producto: Suministrar aire fresco. En caso de trastornos, consultar al médico.

· En caso de contacto con la piel: Por regla general, el producto no irrita la piel.

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- **En caso de con los ojos:** Limpiar los ojos abiertos durante varios minutos con agua corriente.
- **En caso de ingestión:** Consultar inmediatamente un médico.
- **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente** No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:** Combatir los incendios con medidas adaptados al ambiente circundante.
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** No es necesario.
- **6.2 Precauciones relativas al medio ambiente:**
Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**
Desechar el material contaminado como vertido según item 13.
- **6.4 Referencia a otras secciones**
Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**
Si se manipulan correctamente, no se requieren medidas especiales.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:** Ningunos, -as.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.
- **8.1 Parámetros de control**

· **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

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LEP Valor de larga duración: 0,2 *0,05 mg/m³
VLI, como Mn; *respirable, d,

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- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.
- **8.2 Controles de la exposición**
- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**
Mantener alejado de alimentos, bebidas y alimentos para animales.
Lavarse las manos antes de las pausas y al final del trabajo.
- **Protección respiratoria:** No es necesario.
- **Protección de manos:**
El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.
Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.
Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.
- **Material de los guantes**
La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro.
- **Tiempo de penetración del material de los guantes**
El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.
- **Protección de ojos:** No es necesario.

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

· Forma:

Cristalino

· Color:

No determinado.

· Olor:

Característico

· Umbral olfativo:

No determinado.

· valor pH:

No aplicable.

· Cambio de estado

· Punto de fusión/punto de congelación:

>240 °C

· Punto inicial de ebullición e intervalo de ebullición:

Indeterminado.

· Punto de inflamación:

No aplicable.

· Inflamabilidad (sólido, gas):

Peligro de fuego en contacto con materias combustibles.

· Temperatura de descomposición:

No determinado.

· Temperatura de auto-inflamación:

No determinado.

· Propiedades explosivas:

El producto no es explosivo.

· Límites de explosión:

· Inferior:

No determinado.

· Superior:

No determinado.

· Presión de vapor a 20 °C:

0 hPa

· Densidad a 20 °C:

2,703 g/cm³

· Densidad relativa

No determinado.

· Densidad de vapor

No aplicable.

· Tasa de evaporación:

No aplicable.

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· Solubilidad en / miscibilidad con · agua a 20 °C:	64,3 g/l
· Coeficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad:	No aplicable.
· Dinámica:	No aplicable.
· Cinemática:	No aplicable.
· 9.2 Otros datos	No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**
Nocivo en caso de ingestión.

· **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

Oral	LD50	1.090 mg/kg (rat)
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- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción**
Se sospecha que daña al feto.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.

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· **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.

· **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.

· **Efectos ecotóxicos:**

· **Observación:** Muy tóxico para peces.

· **Indicaciones medioambientales adicionales:**

· **Indicaciones generales:**

Nivel de riesgo para el agua 3 (clasificación de listas): muy peligroso para el agua

No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados, ni siquiera en pequeñas cantidades.

Una cantidad ínfima vertida en el subsuelo ya representa un peligro para el agua potable.

Vertido en aguas superficiales, también es tóxico para los peces y el plancton.

muy tóxico para organismos acuáticos

· **12.5 Resultados de la valoración PBT y mPmB**

· **PBT:** No aplicable.

· **mPmB:** No aplicable.

· **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

· **13.1 Métodos para el tratamiento de residuos**

· **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.

· **Embalajes sin limpiar:**

· **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

· **14.1 Número ONU**

· **ADR, IMDG, IATA**

UN1490

· **14.2 Designación oficial de transporte de las Naciones Unidas**

· **ADR**

1490 PERMANGANATO POTÁSICO, PELIGROSO PARA EL MEDIO AMBIENTE

· **IMDG, IATA**

POTASSIUM PERMANGANATE

· **14.3 Clase(s) de peligro para el transporte**

· **ADR**



· **Clase**

5.1 Materias comburentes

· **Etiqueta**

5.1

· **IMDG, IATA**



· **Class**

5.1 Materias comburentes

· **Label**

5.1

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· 14.4 Grupo de embalaje · ADR, IMDG, IATA	II
· 14.5 Peligros para el medio ambiente: · Marcado especial (ADR):	Sustancia sólida potencialmente peligrosas para el medio ambiente Símbolo (pez y árbol)
· 14.6 Precauciones particulares para los usuarios · Número de identificación de peligro (Número Kemler): · Número EMS: · Segregation groups · Stowage Category · Segregation Code	Atención: Materias comburentes 50 5.1-06 Permanganates D SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides SG60 Stow "separated from" SGG16-peroxides
· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR · Cantidades limitadas (LQ) · Cantidades exceptuadas (EQ)	1 kg Código: E2 Cantidad neta máxima por envase interior: 30 g Cantidad neta máxima por embalaje exterior: 500 g
· Categoría de transporte · Código de restricción del túnel	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· "Reglamentación Modelo" de la UNECE:	UN 1490 PERMANGANATO POTÁSICO, 5.1, II, PELIGROSO PARA EL MEDIO AMBIENTE

SECCIÓN 15: Información reglamentaria

- 15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla
- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I No contiene la sustancia.
- Categoría Seveso
P8 LÍQUIDOS Y SÓLIDOS COMBURENTES
E1 Peligroso para el medio ambiente acuático
- Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 50 t
- Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 200 t
- Directiva 2011/65/UE sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos - Anexo II
No contiene la sustancia.

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· 15.2 Evaluación de la seguridad química: Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· Abreviaturas y acrónimos:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Sólidos comburentes – Categoría 2

Acute Tox. 4: Toxicidad aguda - oral – Categoría 4

Repr. 2: Toxicidad para la reproducción – Categoría 2

Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1

Aquatic Chronic 1: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 1