Potassium permanganate solution

35184-1L

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

1.1. Product identifier

Product name	:	Potassium permanganate solution
SDS-number	:	000000021503
Type of product	:	Mixture
Remarks	:	SDS according to Art. 31 of Regulation (EC) 1907/2006.

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

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Solstice Advanced Materials US, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:	(49) 5137-999 0	
For further information, please contact:	:	SafetyDataSheet@solstice.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1 303-739-1378 (Medical)
	:	Poison Control Center: United Kingdom: (+44) 844 892 0111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin irritation Category 2
H315 Causes skin irritation.
Serious eye damage Category 1
H318 Causes serious eye damage.
Reproductive toxicity Category 2
H361d Suspected of damaging the unborn child.
Short-term (acute) aquatic hazard Category 1
H400 Very toxic to aquatic life.
Long-term (chronic) aquatic hazard Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:		
Signal word	:	Danger	
Hazard statements	:	H315	Causes skin irritation.
		H318	Causes serious eye damage.
		H361d	Suspected of damaging the unborn child.
		H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P201	Obtain special instructions before use.
		P273	Avoid release to the environment.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Hazardous components which must be listed on the label	:	potassium permanganate	

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	CAS-No. Index-No. EC-No.	Classification 1272/2008	Concentration	Remarks
potassium permanganate	7722-64-7 025-002-00-9 231-760-3	Ox. Sol. 2; H272 Acute Tox. 4; H302; Oral Skin Corr. 1C; H314 Repr. 2; H361d STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 3 % - < 5 %	M(Aquatic Acute) = 10 M(Aquatic Chronic) = 10

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:
If breathed in, move person into fresh air. If symptoms persist, call a physician.

Skin contact:
Wash off with soap and plenty of water. If symptoms persist, call a physician.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Remove contact lenses. Obtain medical attention.

Ingestion:
Clean mouth with water and drink afterwards plenty of water. Consult a physician.

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

No data available

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

No data available

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Foam
Carbon dioxide (CO2)
Dry powder

Extinguishing media which shall not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
No unprotected exposed skin areas.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.Do not use a solid water stream as it may scatter and spread fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Provide adequate ventilation. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Wear personal protective equipment. Use only in well-ventilated areas. Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion:
Normal measures for preventive fire protection.

Hygiene measures:
Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Keep working clothes separately. Wash hands before breaks and at the end of workday. When using do not eat or drink. Usual hygienic precautions must be taken when working with dangerous cancer causing substances.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
potassium permanganate	EH40 WEL	as Mn		Listed
potassium permanganate	EU ELV TWA	0,05 mg/m3 as Mn Respirable fraction.		Indicative
potassium permanganate	EU ELV TWA	0,2 mg/m3 as Mn Inhalable fraction.		Indicative
potassium permanganate	EH40 WEL TWA	0,05 mg/m3 as Mn Respirable fraction.		

EH40 WEL - UK. EH40 Workplace Exposure Limits (WELs), as amended

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EU ELV - EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended

TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
potassium permanganate	Workers / Long-term systemic effects		0,218 mg/m3	Inhalation	
potassium permanganate	Consumers / Long-term systemic effects		0,0389 mg/m3	Inhalation	

potassium permanganate	Consumers / Long-term systemic effects		0,01111mg/ kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
potassium permanganate	Fresh water: 0,00006 mg/l	Assessment factor: 1000
potassium permanganate	Marine water: 0,00006 mg/l	Assessment factor: 100
potassium permanganate	Sewage treatment plant: 1,64 mg/l	Assessment factor: 100

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Avoid contact with skin, eyes and clothing.

Engineering measures
Provide adequate ventilation.

Personal protective equipment
Respiratory protection:
In the case of vapour formation use a respirator with an approved filter.

Hand protection:
Glove material: Natural Latex
Break through time: > 480 min
Glove thickness: 0,6 mm
Lapren®706
Gloves must be inspected prior to use.
Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety glasses with side-shields

Skin and body protection:
Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	:	liquid
(b) Colour	:	dark violet
(c) Odour	:	No data available
(d) Melting point/freezing point	:	No data available
(e) Boiling point/boiling range	:	No data available
(g) Lower and upper explosion limit	:	Lower explosion limit No data available
	:	Upper explosion limit No data available

(h) Flash point	:	Not applicable
(i) Auto-ignition temperature	:	No data available No data available
(j) Decomposition temperature	:	No decomposition if used as directed.
(k) pH	:	No data available
(l) Viscosity, kinematic	:	No data available
(m) Solubility(ies)	:	Water solubility: No data available
(n) Partition coefficient: n-octanol/water	:	No data available
(o) Vapour pressure	:	No data available
(p) Density and / or relative density	:	No data available
(q) Relative vapour density	:	No data available
(r) Particle characteristics	:	No data available

9.2 Other Information

Polymer characteristics	:	No data available
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Strong reducing agents
Powdered metals
Copper
Zinc
Peroxides

10.6. Hazardous decomposition products

Potassium oxide
Manganese oxide fumes

SECTION 11: Toxicological information

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

(a) Acute toxicity

Acute oral toxicity:
Acute toxicity estimate
Value: > 2.000 mg/kg
Method: Calculation method

Acute dermal toxicity:
No data available

Acute inhalation toxicity:
No data available

Acute toxicity (other routes of administration):
No data available

(b) Skin corrosion/irritation:
Classification based on Annex VI of regulation 1272/2008/EC.

(c) Serious eye damage/eye irritation:
Classification based on Annex VI of regulation 1272/2008/EC.

(d) Respiratory or skin sensitisation:
No data available

(e) Germ cell mutagenicity:
Note: No data available

(f) Carcinogenicity:
Species: not specified
Note: No data available

(g) Reproductive toxicity:
Species: not specified
Remarks: No data available

(h) STOT-single exposure:
No data available

(i) STOT - repeated exposure:
No data available

(j) Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
Toxicological data applies only to the water free substance.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
Classification based on Annex VI of regulation 1272/2008/EC.

Toxicity to aquatic plants:
Classification based on Annex VI of regulation 1272/2008/EC.

Toxicity to Microorganisms:
Classification based on Annex VI of regulation 1272/2008/EC.

Toxicity to aquatic invertebrates:
Classification based on Annex VI of regulation 1272/2008/EC.

12.2. Persistence and degradability

Biodegradability:
No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Ecological data applies only to the water free substance.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006
For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID:3082 IMDG:3082 IATA:3082

14.2 UN proper shipping name

ADR/RID:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(POTASSIUM PERMANGANATE)
IMDG:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(POTASSIUM PERMANGANATE)
IATA:Environmentally hazardous substance, liquid, n.o.s.(Potassium permanganate)

14.3 Transport hazard class(es)

ADR/RID:9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID:III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes Marine pollutant: yes

14.6 Special precautions for user

Not regulated for transport when single and combination packagings are <= 5L for liquids or <= 5kg for solids per ADR SP 375, IMDG 2.10.2.7 and IATA SP A197.

14.7 Maritime transport in bulk according to IMO instruments
No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III Listed in Regulation : E1: Hazardous to the aquatic environment	**Quantity**: 100.000 kg **Quantity**: 200.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).

Other inventory information

USA. List of Active Substances on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory, as amended
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Domestic Substances List (DSL), as amended
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

potassium permanganate	:	H272	May intensify fire; oxidizer.
		H302	Harmful if swallowed.
		H314	Causes severe skin burns and eye damage.
		H361d	Suspected of damaging the unborn child.
		H373	May cause damage to organs through prolonged or repeated exposure.
		H400	Very toxic to aquatic life.
		H410	Very toxic to aquatic life with long lasting effects.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level

PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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