

SECTION1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code : POTASSIO PERMANGANATO

Trades code : 100262

Chemical Name: potassium permanganate CAS: 7722-64-7 - EC No: 231-760-3 - Index No: 025-002-00-9

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

Photographic Process

Sectors of use:

Professional use[SU22]

Product category:

Photochemicals

Process categories:

Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)[PROC5]

Uses advised against

Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

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SECTION2. Hazards identification

2.1. Classification of the substance or mixture

CAS 7722-64-7 CEE 025-002-00-9 EINECS 231-760-3

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

GHS05, GHS07, GHS09

Hazard Class and Category Code(s):

Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1

Hazard statement Code(s):

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life. (Acute toxicity M-factor = 1)

H410 - Very toxic to aquatic life with long lasting effects. (Acute toxicity M-factor = 1)

Harmful product: do not ingest

Corrosive product: causes severe skin burns and eye damage.

If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

The product is dangerous for the environment as it is very toxic to aquatic organisms

The product is dangerous to the environment as it is very toxic to aquatic life with long lasting effects

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):

GHS05, GHS07, GHS09 - Danger

Hazard statement Code(s):

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H410 - Very toxic to aquatic life with long lasting effects. (Acute toxicity M-factor = 1)

Supplemental Hazard statement Code(s):

not applicable

Precautionary statements:

Prevention

P260 - Do not breathe dust, fume, gas, mist, vapours, spray.

P273 - Avoid release to the environment.

P280 - Wear protective gloves protective clothing eye protection face protection.

Response

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a doctor if symptoms persist

P391 - Collect spillage.

Disposal

P501 - Dispose of contents and container in accordance with the laws in force

Contains:

potassium permanganate



2.3. Other hazards

The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII
The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with Dlgs. April 9, 2008 # 81. Workers exposed to this chemical agent should not be subjected to health surveillance if the results of the risk assessment show that, in relation to the type and quantity of hazardous chemical agent and that agent exposure frequency and mode, you just a "moderate risk" for the health and safety of workers and that the measures laid down in the decree are sufficient to reduce the risk.

SECTION3. Composition/information on ingredients

3.1 Substances

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
potassium permanganate	100%	Ox. Sol. 2, H272; Acute Tox. 4, H302; Skin Corr. 1A, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	025-002-00-9	7722-64-7	231-760-3	

3.2 Mixtures

Irrilevant

SECTION4. First aid measures

4.1. Description of first aid measures**Inhalation:**

Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product):

Take contaminated clothing Immediately off.

In case of contact with skin, wash immediately with water.

Consult a physician immediately

Direct contact with eyes (of the pure product):

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

Ingestion:

The product is harmful and can cause irreversible damages even following a single exposure if swallowed.

Drink water with egg white; do not give bicarbonate.

Absolutely do not induce vomiting or emesis. Seek medical advice immediately.

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

Causes severe skin burns and eye damage. Harmful if swallowed.

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

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

SECTION5. Firefighting measures**5.1. Extinguishing media****Advised extinguishing agents:**

Water spray, CO₂, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing means to avoid:

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus

Safety helmet and full protective suit.

The spray water can be used to protect the people involved in the extinction

You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

SECTION6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****6.1.1 For non-emergency personnel:**

Leave the area surrounding the spill or release. Do not smoke

Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Provision of sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill

Inform the competent authorities.

Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:

Rapidly recover the product, wear a mask and protective clothing
Recover the product for reuse, if possible, or the removal.

6.3.2 For cleaning up:

To clean the floor and all objects contaminated by this material use water
After wiping up, wash with water the area and materials involved

6.3.3 Other information:

None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Wear protective gloves protective clothing eye protection face protection.
In residential areas do not use on large surfaces.
At work do not eat or drink.
Do not eat, drink or smoke when using this product.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool place, away from sources of heat and direct exposure of sunlight.

7.3. Specific end use(s)

Professional use:
Photographic and cinematographic treatment

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

- Substance: potassium permanganate

DNEL

Systemic effects Long term Workers dermal = 1,25 (mg/kg bw/day)

Systemic effects Long term Consumers dermal = 0,2 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 0,02 (mg/kg bw/day)

Local effects Long term Workers dermal = 0,17 (mg/kg bw/day)

Local effects Long term Consumers dermal = 0,03 (mg/kg bw/day)

Local effects Long term Consumers inhalation = 0,03 (mg/m³)

PNEC

Sweet water = 0,00006 (mg/l)

intermittent emissions = 0,00006 (mg/l)

STP = 1,64 (mg/l)

Air = 0,2 (mg/m³)

8.2. Exposure controls

Appropriate engineering controls:

Professional use:

Not established

Individual protection measures:

(a) Eye / face protection



Wear mask
 (b) Skin protection
 (i) Hand protection
 When handling the pure product use chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3)
 (ii) Other
 When handling the pure product wear full protective skin clothing.
 (c) Respiratory protection
 Use adequate protective respiratory equipment (EN 14387:2008)
 (d) Thermal hazards
 No hazard to report
 Environmental exposure controls:
 Related to contained substances:
 potassium permanganate:
 Do not let this chemical agent contaminate the environment.

SECTION9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	Solid	
Odour	Not determined	
Odour threshold	undefined	
pH	8.00 ± 0.10 a 20 °C	pH METRO
Melting point/freezing point	Irrilevant	
Initial boiling point and boiling range	Not determined	
Flash point	non flammable	ASTM D92
Evaporation rate	Not determined	
Flammability (solid, gas)	Irrilevant	
Upper/lower flammability or explosive limits	undefined	
Vapour pressure	Not determined	
Vapour density	Not determined	
Relative density	2.710 gr/cm3	
Solubility	in water	
Water solubility	Complete	
Partition coefficient: n-octanol/water	Not determined	
Auto-ignition temperature	Not determined	
Decomposition temperature	Not determined	
Viscosity	not determined	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	

9.2. Other information

No data available.

SECTION10. Stability and reactivity

10.1. Reactivity

Related to contained substances:
 potassium permanganate:

Strong oxidizing agent, may cause ignition of combustible substances and increases the speed of combustion, when exposed to intense heat sources (150 C) can decompose releasing oxygen.

In contact with other chemicals (combustible organic compounds, inorganic easily oxidized and finely divided metals) may cause a rapid exothermic reaction.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

May cause explosions in contact with acid and acetic anhydride, ammonium nitrate, dimethyl formamide, formaldehyde, concentrated hydrochloric acid, potassium chloride sulfuric acid and sulfuric acid water.

Highly sensitive forms explosive mixtures with organic nitro derivatives and Aluminum powder, ammonium perchlorate, arsenic, phosphorus,

May cause ignition of combustible substances as organic compounds, alcohols, glycols, amines, anhydrides

10.4. Conditions to avoid

Related to contained substances:

potassium permanganate:

Do not expose the product to high temperatures. Danger of ignition with organic substances keep the product away from flames free. Preventing the formation of electrostatic charges

10.5. Incompatible materials

Acids, peroxides, formaldehyde, antifreeze, hydraulic fluids and all fuels or easily oxidized organic materials and inorganic materials including metal powders. In contact with hydrochloric acid, chlorine gas is released

10.6. Hazardous decomposition products

Manganese oxide and potassium oxide.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

ATE oral = 2.000,0 mg/kg

ATE dermal = ∞

ATE inhal = ∞

(a) acute toxicity: Harmful product: do not ingest

(b) skin corrosion/irritation Corrosive product: causes severe skin burns and eye damage.

potassium permanganate: Skin-rabbit score: Corrosive-4:00

(c) serious eye damage/irritation: Corrosive product: causes severe skin burns and eye damage. - If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

(d) respiratory or skin sensitization: based on available data, the classification criteria are not met.

(e) germ cell mutagenicity: based on available data, the classification criteria are not met.

(f) carcinogenicity: based on available data, the classification criteria are not met.

(g) reproductive toxicity: based on available data, the classification criteria are not met.

(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.

(i) specific target organ toxicity (STOT) repeated exposure based on available data, the classification criteria are not met.

(j) aspiration hazard: based on available data, the classification criteria are not met.

POTASSIO PERMANGANATO:

LD50 (rat) Oral (mg/kg body weight) = 2000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

Related to contained substances:

potassium permanganate:

EXPOSURE: The substance can be absorbed into the body by inhalation of its dust and by ingestion

Inhalation risk Evaporation at 20 ° C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

EFFECTS OF SHORT-TERM EXPOSURE: The substance 'corrosive to the eyes, the skin and the respiratory tract.

Corrosive on ingestion. Inhalation of the dust of this substance may cause lung edema (see Notes). The effects may be delayed. And 'effects may be delayed.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: The substance may have effects on the lungs, resulting in bronchitis and pneumonia

ACUTE HAZARDS / SYMPTOMS

Inhalation Burning sensation. Cough. Sore throat. Heavy breath. difficulty breathing. Symptoms may be delayed (see Notes).

SKIN Redness. skin burns. Ache.

Eyes Redness. Ache. Severe deep burns.

Ingestion Burning sensation. Abdominal pain. Diarrhea. Nausea. Vomiting. Shock or collapse.

N O T E The symptoms of lung edema often do not become manifest until a few hours and they are aggravated by physical effort. They are therefore essential the rest and medical observation.

LD50 (rat) Oral (mg/kg body weight) = 2000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

SECTION12. Ecological information

12.1. Toxicity

POTASSIO PERMANGANATO:

C(E)L50 (mg/l) = 0,5

The product is dangerous for the environment as it is very toxic to aquatic organisms following acute exposure. Use according to good working practices to avoid pollution into the environment.

12.2. Persistence and degradability

The product potentially biodegradable

12.3. Bioaccumulative potential

Bioconcentration factor (BCF): < 10000

Remark: Can accumulate in aquatic organisms.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

12.6. Other adverse effects

There is no specific information on this product.

SECTION13. Disposal considerations

13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

SECTION14. Transport information

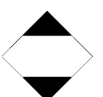
14.1. UN number

ADR/RID/IMDG/ICAO-IATA: 1490

ADR exemption because compliance with the following characteristics:

Combination packagings: per inner packaging 1 kg per package 30 Kg

Inner packagings placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 1 kg per package 20 Kg



14.2. UN proper shipping name

ADR/RID/IMDG: PERMANGANATO DI POTASSIO
ADR/RID/IMDG: POTASSIUM PERMANGANATE
ICAO-IATA: POTASSIUM PERMANGANATE

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class : 5.1
ADR/RID/IMDG/ICAO-IATA: Label : Limited quantities
ADR: Tunnel restriction code : E
ADR/RID/IMDG/ICAO-IATA: Limited quantities : 1 kg
IMDG - EmS : F-H, S-Q

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: II

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is environmentally hazardous
IMDG: Marine polluting agent : Yes

14.6. Special precautions for user

The transport must be carried out by authorised vehicles carrying dangerous goods in accordance with the requirements of the current edition of the agreement A.D.R. applicable national provisions.

The transport must be carried out in the original packaging and in packages that are made from materials resistant to the content and not likely to generate with this dangerous reactions. Employees to the loading and unloading of dangerous goods have received proper training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

It is not intended to carry bulk

SECTION15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Legislative Decree. 02/03/1997 n. 52 (Classification, packaging and labeling of dangerous substances). Legislative Decree 14/03/2003 n. 65 (Classification, packaging and labeling of dangerous substances). Legislative Decree. 02/02/2002 n. 25 (Risks related to chemical agents at work). D.M. 26/02/2004 Work (Exposure Limits Professional); D.M. 03/04/2007 (Implementation of Directive n. 2006/8 / EC). Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 1272/2008 (CLP), Regulation (EC) 790 / 2009.D.Lgs. September 21, 2005 n. 238 (Seveso Ter).

Seveso category:

E1 - ENVIRONMENTAL HAZARDS
REGULATION (EU) No 1357/2014 - waste:
HP8 - Corrosive
HP14 - Ecotoxic

15.2. Chemical safety assessment

The supplier has made an assessment of chemical safety

SECTION16. Other information**16.1. Other information**

Points modified compared to previous release: 2.3. Other hazards, 10.4. Conditions to avoid, 12.5. Results of PBT and vPvB assessment, 14.2. UN proper shipping name

Description of the hazard statements exposed to point 3

H272 = May intensify fire; oxidiser.
H302 = Harmful if swallowed.

H314 = Causes severe skin burns and eye damage.

H400 = Very toxic to aquatic life.

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

Main normative references:

Directive 1999/45/EC

Directive 2001/60/EC

Regulation 1272/2008/EC

Regulation 2010/453/EC

Regolamento 529/2012 and subsequent updates

This data sheet cancels and replaces any previous edition.
