

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 12/03/2019

Reviewed on 12/03/2019

1 Identification

- **Product identifier**
- **Trade name: Nitrite No.2**
- **Catalogue number:** 00515211, 515210BT, 515211BT, 00515219BT, 505211, 4515210BT, 4515211BT, 00505211
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

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



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



GHS07



GHS08



GHS09

- **Signal word** Warning
- **Hazard-determining components of labeling:**
potassium permanganate
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.

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- P302+P352 If on skin: Wash with plenty of water.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P405 Store locked up.

• **Other hazards** No further relevant information available.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 9004-34-6 EINECS: 232-674-9 RTECS: FJ5691460	cellulose	0.1–≤2.5%
CAS: 7722-64-7 EINECS: 231-760-3 Index number: 025-002-00-9 RTECS: SD 6475000	potassium permanganate ⚠ Ox. Sol. 2, H272; ⚠ Repr. 2, H361; ⚠ Skin Corr. 1C, H314; ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); ⚠ Acute Tox. 4, H302	1–≤2.5%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with plenty of water.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**
irritations
after swallowing of large amounts:
gastric or intestinal disorders
sickness
vomiting
cardiovascular disorders
- **Danger:** Danger of disturbed cardiac rhythm.
- **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**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Hydrogen chloride (HCl)
Potassium oxide
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

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Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Advice for emergency responders:** Protective equipment: see section 8
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

- **Precautions for safe handling**
- **Advice on safe handling:** No special precautions are necessary if used correctly.
- **Hygiene measures:**
Avoid contact with the skin.
Avoid contact with the eyes.
Take off immediately all contaminated clothing.
Wash hands before breaks and at the end of work.
Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
Do not store together with acids.
Store away from oxidizing agents.
- **Further information about storage conditions:**
Store under lock and key and with access restricted to technical experts or their assistants only.
Protect from heat and direct sunlight.
Protect from exposure to the light.
Store in dry conditions.
Protect from humidity and water.
- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Control parameters**

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

CAS: 9004-34-6 cellulose

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust, **respirable fraction

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EV (Canada)	Long-term value: 10 mg/m ³ paper fibre, total dust
CAS: 7722-64-7 potassium permanganate	
PEL (USA)	Ceiling limit value: 5 mg/m ³ as Mn
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0.02* 0.1** mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2; 0.02* mg/m ³ as Mn; R, *respirable

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.
- **Personal protective equipment:**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Breathing equipment:**
Under normal use conditions according to the instruction manual no personal protective equipment is needed.
If exposure limits are exceeded or health impacts are experienced use respiratory protective device against the effects of fume/dust/aerosol.
- **Recommended filter device for short term use:** Filter P1
- **Protection of hands:**
Protective gloves
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
- **Penetration time of glove material**
Value for the permeation: Level ≤ 1 (10 min)
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**
Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

• Information on basic physical and chemical properties	
• Appearance:	
Form / Physical state:	Tablets
Color:	Violet
• Odor:	
Odor threshold:	Odorless
• pH-value (2.6 g/l) at 20°C (68°F):	
9.1	
• Melting point/freezing point:	
Not determined.	
• Initial boiling point and boiling range:	
Not determined.	
• Flash point:	
Not applicable.	
• Flammability (solid, gas):	
The product is not combustible.	
• Ignition temperature:	
Not applicable.	
• Decomposition temperature:	
Not determined.	
• Auto-ignition temperature:	
Product is not self-igniting.	

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<ul style="list-style-type: none"> • Danger of explosion: • Flammability or explosive limits: <ul style="list-style-type: none"> Lower: Upper: 	Product does not present an explosion hazard. Not applicable. Not applicable.
• Oxidizing properties:	none
<ul style="list-style-type: none"> • Vapor Pressure: • Density at 20°C (68°F): • Relative density: • Vapor density: • Evaporation rate: 	Not applicable. ~ 2 g/cm ³ (~ 16.69 lbs/gal) Not determined. Not applicable. Not applicable.
• Solubility(ies) Water:	Partially insoluble.
• Partition coefficient (n-octanol/water):	Not applicable.
• Viscosity:	Not applicable.
<ul style="list-style-type: none"> • Solvent content: <ul style="list-style-type: none"> Organic solvents: Solids content: 	0.0 % 100.0 %
• Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
 Reacts with acids.
 Reacts with oxidizing agents.
 --> Forms heat.
 Reacts with ammonia (NH₃).
- **Conditions to avoid** Strong heating (decomposition)
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** see section 5

*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

• **Acute toxicity estimate (ATE_(mix)) - Calculation method:**

Oral	GHS ATE _(mix)	2596 mg/kg (rat)
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• **LD/LC50 values that are relevant for classification:**

The following statements refer to the individual components.

CAS: 9004-34-6 cellulose

Oral	LD50.	>5000 mg/kg (rat)
Dermal	LD50.	>2000 mg/kg (rabbit) (RTECS, limit test)
Inhalative	LC50.	>5.8 mg/l/4h (rat) (RTECS, limit test)

CAS: 7722-64-7 potassium permanganate

Oral	LD50	750 mg/kg (rat) (RTECS)
	LDLo	100 mg/kg (human) (IUCLID)

- **Primary irritant effect:**
- **on the skin:** Causes skin irritation.
- **on the eye:** Causes serious eye irritation.

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· Information on components:		
CAS: 9004-34-6 cellulose		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)
CAS: 7722-64-7 potassium permanganate		
Irritation of skin	OECD 404	(rabbit: burns) (Merck / Burns after prolonged exposure.)
· Sensitization: Based on available data, the classification criteria are not met.		
· Information on components:		
CAS: 9004-34-6 cellulose		
Sensitization	OECD 406	(guinea pig: negative)
· Carcinogenic categories		
· IARC (International Agency for Research on Cancer)		
None of the ingredients is listed.		
· NTP (National Toxicology Program)		
None of the ingredients is listed.		
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		
· Other information: see section 8 / 15		
· Synergistic Products: None		
· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):		
The following statements refer to the mixture:		
Repr. 2		
· 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 fertility or the unborn child.		
· STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met.		
· STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met.		
· Aspiration hazard Based on available data, the classification criteria are not met.		

12 Ecological information

· Toxicity		
· Aquatic toxicity:		
CAS: 7722-64-7 potassium permanganate		
EC50	0.056 mg/l/48h (Daphnia magna)	(ECOTOX)
EC50	0.41 mg/l/72 h (Algal toxicity)	(ECOTOX)
LC50	0.1 mg/l/96h (fish)	(Ictalurus catus / ECOTOX)
· Other information:		
The following applies to manganese ions: toxic to water organisms.		
In flowing waters, depending on the mixture, moderate to high toxic effect.		
· Persistence and degradability No further relevant information available.		
· Bioaccumulative potential		
Pow = n-octanol/wasser partition coefficient		
log Pow < 1 = Does not accumulate in organisms.		
CAS: 7722-64-7 potassium permanganate		
log Pow	-1.73 (.) (calculated)	(Merck)
· Mobility in soil No further relevant information available.		

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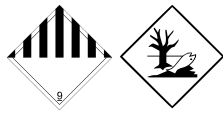
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- **Other adverse effects** Avoid transfer into the environment.

13 Disposal considerations

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

*14 Transport information

<ul style="list-style-type: none"> • UN-Number • DOT • IMDG, IATA 	none UN3077
<ul style="list-style-type: none"> • UN proper shipping name • DOT • IMDG • IATA 	none ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (POTASSIUM PERMANGANATE), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (POTASSIUM PERMANGANATE)
<ul style="list-style-type: none"> • Transport hazard class(es) • DOT • Class 	none
<ul style="list-style-type: none"> • IMDG, IATA 	
<ul style="list-style-type: none"> • Class • Label 	9 Miscellaneous dangerous substances and articles 9
<ul style="list-style-type: none"> • Packing group • DOT • IMDG, IATA 	none III
<ul style="list-style-type: none"> • Environmental hazards: • Marine pollutant: • Special marking (IATA): 	Product contains environmentally hazardous substances: potassium permanganate Symbol (fish and tree) Symbol (fish and tree)
<ul style="list-style-type: none"> • Special precautions for user • Danger code (Kemler): • EMS Number: • Segregation groups • Stowage Category • Stowage Code 	Warning: Miscellaneous dangerous substances and articles 90 F-A,S-F Permanganates A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
<ul style="list-style-type: none"> • Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> • Transport/Additional information: 	Not dangerous according to the above specifications.
<ul style="list-style-type: none"> • IMDG • Limited quantities (LQ) 	5 kg

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- **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

*15 Regulatory information

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

- **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

CAS: 7722-64-7 | potassium permanganate

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

CAS: 7722-64-7 | potassium permanganate

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **New Jersey Right-to-Know List:**

CAS: 9004-34-6 | cellulose

CAS: 7722-64-7 | potassium permanganate

- **New Jersey Special Hazardous Substance List:**

None of the ingredients is listed.

- **Pennsylvania Right-to-Know List:**

CAS: 9004-34-6 | cellulose

CAS: 7722-64-7 | potassium permanganate

- **Pennsylvania Special Hazardous Substance List:**

CAS: 7722-64-7 | potassium permanganate

E

- **EPA (Environmental Protection Agency)**

CAS: 7722-64-7 | potassium permanganate

D

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.

- **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.

- **Relevant phrases**

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H361 Suspected of damaging fertility or the unborn child.

H400 Very toxic to aquatic life.

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H410 Very toxic to aquatic life with long lasting effects.

• **Date of preparation / last revision** 12/03/2019 / 22• **Abbreviations and acronyms:**

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ACGIH® - American Conference of Governmental Industrial Hygienists

•A1 - Confirmed human carcinogen

•A2 - Suspected human carcinogen

•A3 - Confirmed animal carcinogen with unknown relevance to humans

•A4 - Not classifiable as a human carcinogen

•A5 - Not suspected as a human carcinogen

IARC - International Agency for Research on Cancer

•Group 1 - Carcinogenic to humans

•Group 2A - Probably carcinogenic to humans

•Group 2B - Possibly carcinogenic to humans

•Group 3 - Not classifiable as to carcinogenicity to humans

•Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

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

ELINCS: European List of Notified Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

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

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

• **Sources**

Data arise from safety data sheets, reference works and literature.

ECOTOX Database

IUCLID (International Uniform Chemical Information Database)

RTECS (Registry of Toxic Effects of Chemical Substances)

• *** Data compared to the previous version altered.**