

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

Printing date 04.06.2019

Version number 45

Revision: 21.03.2019

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

- **1.1 Product identifier**
- **Product name:** DPD 3 Reagent
- **Catalog number:** 471030
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:** Reagent for water analysis
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**  
Tintometer GmbH  
Lovibond® Water Testing  
Schleefstraße 8-12  
D 44287 Dortmund  
Deutschland  
Made in Germany  
www.lovibond.com
- **Informing department:** e-mail: sds@tintometer.de
- **Contact for technical details:** e-mail: technik@tintometer.de
- **1.4 Emergency telephone number:**  
+44 1235 239670  
Languages: English

phone: +49(0)231 945100  
e-mail: verkauf@tintometer.de / sales@tintometer.de

#### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified as hazardous according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards** No further relevant information available.
- **Results of PBT and vPvB assessment**  
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

#### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** aqueous solution
- **Dangerous components:** Void
- **Additional information** For the wording of the listed hazard phrases refer to section 16.

#### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Call a doctor immediately.

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- **After swallowing**  
Rinse out mouth and then drink 1-2 glasses of water.  
In case of persistent symptoms consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed:**  
headache  
allergic reactions  
general feeling of sickness  
irritations  
weakness
- **Information for doctor** Sulphites are strong sensitizers.
- **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 fighting measures that suit the environment.
- **5.2 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.  
Sulphur oxides (SO<sub>x</sub>)  
Hydrogen iodide (HI)
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Wear full protective suit.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter drains.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Ambient fire may liberate hazardous vapours.

### SECTION 6: Accidental release measures

- **6.1 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
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
- **6.3 Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Absorb with liquid-binding material (sand, diatomite, universal binders).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:** No special precautions necessary if used correctly.
- **Hygiene measures:**  
Avoid contact with the eyes.  
Take off immediately all contaminated clothing.  
Wash hands during breaks and at the end of the work.  
Do not eat, drink or smoke when using this product.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.

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- Protect from the effects of light.
- Protect from humidity and keep away from water.
- **Recommended storage temperature:** 6°C - 10°C
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Recommended monitoring procedures:**  
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **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**
- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter B
- **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:  $\geq 0.11$  mm
- **Penetration time of glove material**  
Value for the permeation: Level = 1 ( < 10 min )  
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or water bodies.

### SECTION 9: Physical and chemical properties

· <b>9.1 Information on basic physical and chemical properties</b>	
· <b>Appearance:</b>	
Form / Physical state:	Fluid
Colour:	Colourless
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not applicable
· <b>pH-value at 20°C:</b>	5.4
· <b>Melting point/Freezing point:</b>	Not determined
· <b>Initial boiling point and boiling range:</b>	100°C
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gas):</b>	Not applicable.
· <b>Ignition temperature:</b>	Not applicable
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not self-igniting.
· <b>Explosive properties:</b>	Product is not explosive.
· <b>Flammability or explosive limits:</b>	
Lower:	Not applicable

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<b>Upper:</b>	Not applicable
<b>· Oxidising properties:</b>	none
<b>· Vapour pressure:</b>	Not determined.
<b>· Density at 20°C:</b>	1.35 g/cm <sup>3</sup>
<b>· Relative density:</b>	Not determined.
<b>· Vapour density:</b>	Not determined.
<b>· Evaporation rate:</b>	Not determined.
<b>· Solubility(ies):</b>	
<b>Water:</b>	Fully miscible
<b>· Partition coefficient: n-octanol/water:</b>	Not determined.
<b>· Viscosity:</b>	Not determined.
<b>· Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	80.0 %
<b>Solids content:</b>	20.0 %
<b>· 9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions** Reacts with oxidizing agents
- **10.4 Conditions to avoid** strong heating
- **10.5 Incompatible materials:** acids
- **10.6 Hazardous decomposition products:** see section 5

### SECTION 11: Toxicological information

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

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

##### CAS: 7681-11-0 potassium iodide

Oral	LD50	2,779 mg/kg (rat) (MERCK)
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- **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.
- **Information on components:** The following applies to iodides in general: Sensitation possible at predisposed persons.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
- **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** Based on available data, the classification criteria are not met.
- **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.
- **Information on components:**  
CAS 7758-83-7: Did not show teratogenic effects in animal experients (IUCLID).

##### CAS: 7681-11-0 potassium iodide

OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test)
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- **Additional toxicological information:**  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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iodide: chronic hypothyroidism  
 Iodine salts can cause birth defects, illness and death of a fetus. (GESTIS)

### SECTION 12: Ecological information

#### · 12.1 Toxicity

##### · Aquatic toxicity:

**CAS: 7681-11-0 potassium iodide**

EC50 2.7 mg/l/24h (Daphnia magna)

LC50 8,960 mg/l/96h (rainbow trout)  
(ECOTOX)

#### · 12.2 Persistence and degradability .

##### · Other information:

Mixture of inorganic compounds.

Methods for the determination of biodegradability are not applicable to inorganic substances.

#### · 12.3 Bioaccumulative potential

**CAS: 7681-11-0 potassium iodide**

log Pow 0.04 (.)  
(MERCK)

#### · 12.4 Mobility in soil No further relevant information available.

#### · 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

#### · 12.6 Other adverse effects Avoid transfer into the environment.

#### · Water hazard:

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

### SECTION 13: Disposal considerations

#### · 13.1 Waste treatment methods

##### · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

##### · European waste catalogue

16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

#### · Uncleaned packagings:

##### · Recommendation: Disposal must be made according to official regulations.

##### · Recommended cleaning agent: Water, if necessary with cleaning agent.

### SECTION 14: Transport information

#### · 14.1 UN-Number

##### · ADR, IMDG, IATA

Void

#### · 14.2 UN proper shipping name

##### · ADR

Void

##### · IMDG, IATA

Void

#### · 14.3 Transport hazard class(es)

##### · ADR, IMDG, IATA

##### · Class

Void

#### · 14.4 Packing group

##### · ADR, IMDG, IATA

Void

#### · 14.5 Environmental hazards:

Not applicable.

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· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.

### SECTION 15: Regulatory information

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

##### · Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

##### · Directive 2012/18/EU (SEVESO III):

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

##### · National regulations

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

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

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

#### · 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

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

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

· \* **Data compared to the previous version altered.**