

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

Printing date 16.11.2023

Version number 3 (replaces version 2)

Revision: 16.11.2023

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

##### · 1.1 Product identifier

· **Product name: DPD Indicator Powder**

· **\_SDS valid from Lot: T09B**

· **Catalog number:** 530200., 00530209., 00530201

· **CAS No.:**  
6283-63-2

##### · 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  
Schleefstraße 8-12  
44287 Dortmund  
Made in Germany  
www.lovibond.com

phone: +49 (0)231 94510-0  
e-mail: sales@lovibond.com

The Tintometer Limited  
Lovibond® House  
Sun Rise Way  
Amesbury  
Wiltshire SP4 7GR  
United Kingdom

phone : +44 1980 664800  
e-mail: SDS@lovibond.uk

· **Informing department:**  
e-mail: sds@lovibond.com  
Product Safety Department

· **1.4 Emergency telephone number:**  
+44 1235 239670  
Languages: English

#### SECTION 2: Hazards identification

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

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

##### · 2.2 Label elements

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

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

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**Product name: DPD Indicator Powder**


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- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**

N,N-diethylbenzene-1,4-diammonium sulphate (1:1)

- **Hazard statements**

H302+H312 Harmful if swallowed or in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- **Precautionary statements**

P280 Wear protective gloves.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

P312 Call a POISON CENTER/doctor if you feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of water.

- **2.3 Other hazards** No further relevant information available.

- **Results of PBT and vPvB assessment**

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

- **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

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### SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Designation:**

CAS: 6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate (1:1)

- **Identification number(s):**

EC No: 228-500-6

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### 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; consult doctor in case of symptoms.

- **After skin contact**

Instantly rinse with 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 doctor.

- **After swallowing**

Rinse out mouth and then drink 1-2 glasses of water.

Seek medical treatment.

- **4.2 Most important symptoms and effects, both acute and delayed:**

irritations

allergic reactions

after inhalation:

mucosal irritations, cough, shortness of breath

Systemic effects:

methaemoglobinaemia

headache

cardiovascular disorders

drop in blood pressure

breathing difficulty

cramps

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

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### 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**  
combustible  
Formation of toxic gases is possible during heating or in case of fire.  
Can be released in case of fire:  
nitrous gases  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides (SO<sub>x</sub>)
  - **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.  
Avoid substance contact.  
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.  
Collect mechanically.  
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:** Prevent formation of dust.
- **Hygiene measures:**  
Do not inhale dust / smoke / mist.  
Avoid contact with the skin.  
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**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** see chapter 10
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store in cool, dry conditions in well sealed containers.  
Protect from the effects of light.  
Protect from humidity and keep away from water.  
This product is hygroscopic.
- **Recommended storage temperature:** 20°C +/- 5°C

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- **7.3 Specific end use(s)** No further relevant information available.
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### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
  - **Components with limit values that require monitoring at the workplace:** Not required.
  - **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.
  - **Individual protection measures, such as personal protective equipment**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
  - **Eye/face protection**  
Safety glasses  
Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
  - **Hand protection**  
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.
  - **Other skin protection (body protection):** Protective work clothing.
  - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
  - **Recommended filter device for short term use:** Filter P2
  - **Environmental exposure controls** Avoid release to the environment.
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### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **Physical state** Solid.
- **Form:** Crystalline powder
- **Colour:** Whitish
- **Odour:** Odourless
- **Odour threshold:** Not applicable.
- **Melting point/Freezing point:** 182–187°C
- **Boiling point or initial boiling point and boiling range** 274°C
- **Flammability** combustible
- **Explosive properties:** Product is not explosive.  
The following applies in general to flammable organic substances / preparations: Dust explosion possible if in powder or granular form (fine distribution), mixed with air.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** Not applicable (solid).
- **Flash point:** Not determined.
- **Auto-ignition temperature:** 540°C
- **Decomposition temperature:** Not determined.
- **pH (50 g/l) at 20°C** 2–2.2
- **Kinematic viscosity** Not applicable (solid).

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· <b>Solubility</b>	
· <b>Water at 20°C:</b>	500 g/l Soluble
· <b>Partition coefficient n-octanol/water (log value)</b>	2.24 log POW (calculated)
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density and/or relative density</b>	
· <b>Density at 20°C:</b>	0.55 g/cm <sup>3</sup>
· <b>Relative density:</b>	Not determined.
· <b>Relative gas density</b>	Not applicable (solid).
· <b>Particle characteristics</b>	Not determined.
· <b>9.2 Other information</b>	
· <b>Information with regard to physical hazard classes</b>	
· <b>Corrosive to metals</b>	Void
· <b>Other safety characteristics</b>	
· <b>Oxidising properties:</b>	none
· <b>Additional information</b>	
· <b>Solids content:</b>	100 %
· <b>Molecular formula</b>	C <sub>10</sub> H <sub>16</sub> N <sub>2</sub> · H <sub>2</sub> O <sub>4</sub> S (M = 262.33 g/mol)

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** Dust can combine with air to form an explosive mixture.
- **10.2 Chemical stability**  
Stable at ambient temperature (room temperature).  
sensitivity to light  
sensitive to moisture
- **10.3 Possibility of hazardous reactions** Reacts with oxidizing agents
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** see section 5

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed or in contact with skin.

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

**CAS: 6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate (1:1)**

Oral	LD50	497 mg/kg (rat) (MERCK)
Dermal	LD50	1100 mg/kg (ATE)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Information on components:** CAS 6283-63-2: DPD may cause allergic skin reaction
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Information on components:** CAS 6283-63-2: Sensitization possible in predisposed persons.
- **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** May cause respiratory irritation.
- **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 likely routes of exposure**

CAS 6283-63-2 4-Amino-N,N-diethylaniline sulfate:

In analogy to CAS 93-05-0 Amino-N,N-diethylaniline at workplaces the main route of exposure is via the respiratory tract and the skin.

"The high systemic potential of Amino-N,N-diethylaniline observed in animal experiments after oral application of relatively low

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doses permits the assumption of an effective resorption via the digestive tract that must also be assumed for humans." [GESTIS]

**Additional toxicological information:**

The following applies to aromatic amines in general: systemic effect - methaemoglobinaemia with headache, cardia dysrhythmia, drop in blood pressure, dyspnoea, spasm,  
principal symptom: cyanosis (blue discoloration of the blood)

**CAS: 6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate (1:1)**

(source: GESTIS)

Main toxic effects of CAS 93-05-0 4-Amino-N,N-diethylaniline:

Acute: Irritative effects to the mucosae and the skin, sensitising effects;

Chronic: Skin diseases. Only insufficient information available on the systemic effects.

**11.2 Information on other hazards**

**Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

**Other information**

Other dangerous properties can not be excluded.

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

## SECTION 12: Ecological information

**12.1 Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Bacterial toxicity:** sulphates toxic > 2.5 g/l

**Other information:**

Toxic for fish:

Sulphates > 7 g/l

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow 1-3 = Not worth-mentioning accumulating in organisms.

**CAS: 6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate (1:1)**

log Pow	2.24 (.) (calculated)
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**12.4 Mobility in soil** No further relevant information available.

**12.5 Results of PBT and vPvB assessment**

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

**12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

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

**Water hazard:**

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

## 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.

Hand over to disposers of hazardous waste.

**European waste catalogue**

16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances
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**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleaning agent:** Water, if necessary with cleaning agent.

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### SECTION 14: Transport information

<ul style="list-style-type: none"> <li>· 14.1 UN number or ID number</li> <li>· ADR, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· 14.2 UN proper shipping name</li> <li>· ADR, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· 14.3 Transport hazard class(es)</li> <li>· ADR</li> <li>· Class</li> <li>· Label</li> </ul>	Void - -
<ul style="list-style-type: none"> <li>· IMDG, IATA</li> <li>· Class</li> </ul>	Void
<ul style="list-style-type: none"> <li>· 14.4 Packing group</li> <li>· ADR, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· 14.5 Environmental hazards:</li> <li>· Marine pollutant:</li> </ul>	No
<ul style="list-style-type: none"> <li>· 14.6 Special precautions for user</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· 14.7 Maritime transport in bulk according to IMO instruments</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	Not dangerous according to the above specifications.

### SECTION 15: Regulatory information

<ul style="list-style-type: none"> <li>· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</li> <li>· Poisons Act UK</li> </ul>	
<ul style="list-style-type: none"> <li>· Regulated explosives precursors</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Regulated poisons</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Reportable explosives precursors</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Reportable poisons</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated</li> </ul>	
<ul style="list-style-type: none"> <li>· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Regulation (EC) No 273/2004 on drug precursors</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)</li> </ul>	Substance is not listed.
<ul style="list-style-type: none"> <li>· Substances of very high concern (SVHC) according to REACH, Article 57</li> </ul>	This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

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- **Substances of very high concern (SVHC) according to UK REACH**  
This product does not contain any substances of very high concern above the legal concentration limit of  $\geq 0.1\%$  (w / w).
  - **Directive 2012/18/EU (SEVESO III):**
  - **Named dangerous substances - ANNEX I** Substance is not listed.
  - **Information about limitation of use:** Not required.
  - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
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### \* 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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Training hints** Provide adequate information, instruction and training for operators.
- **Abbreviations and acronyms:**  
 ICAO: International Civil Aviation Organisation  
 EC50: effective concentration, 50 percent (in vivo)  
 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 relatif au transport international 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  
 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  
 SVHC: Substances of Very High Concern  
 vPvB: very Persistent and very Bioaccumulative  
 Acute Tox. 4: Acute toxicity – Category 4  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- **Sources**

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

ECHA: European Chemicals Agency <http://echa.europa.eu>

GESTIS- Stoffdatenbank (Substance Database, Germany)

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