

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

Printing date 10/15/2019

Reviewed on 10/10/2019

## 1 Identification

- **Product identifier**
- **Trade name: DPD Indicator Powder**
- **\_SDS valid from Lot: T09B**
- **Catalogue number: 530200, 4530200, 00530209**
- **CAS Number:**  
6283-63-2
- **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**



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. 2A H319 Causes serious eye irritation.  
STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
N,N-Diethyl-p-phenylenediamine sulfate  
(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.  
P302+P352 If on skin: Wash with plenty of water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

(Contd. on page 2)

US

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

Trade name: **DPD Indicator Powder**

(Contd. of page 1)

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

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
6283-63-2 N,N-Diethyl-p-phenylenediamine sulfate  
(1:1)
- **Identification number(s)**
- **EC number:** 228-500-6

### 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.  
Seek medical treatment.
- **Most important symptoms and effects, both acute and delayed**  
mucosal irritations, cough, breathing difficulty  
methaemoglobinaemia  
allergic reactions  
irritations  
after resorption:
- **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**  
mixture with combustible ingredients  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Nitrogen oxides (NO<sub>x</sub>)  
nitrous gases  
Sulfur oxides (SO<sub>x</sub>)
- **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.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Ambient fire may liberate hazardous vapours.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**  
Wear protective equipment. Keep unprotected persons away.  
Avoid substance contact.

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

Trade name: **DPD Indicator Powder**

(Contd. of page 2)

- 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.
- **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:** 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 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:** Not required.
- **Further information about storage conditions:**
  - Store in cool, dry conditions in well sealed receptacles.
  - Protect from heat and direct sunlight.
  - Protect from exposure to the light.
  - Protect from humidity and water.
  - This product is hygroscopic.
- **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:** Not required.
- **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.
- **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  $\leq 1$  (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

(Contd. on page 4)

— US —

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

Trade name: DPD Indicator Powder

(Contd. of page 3)

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:** Avoid release to the environment.

### 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>Appearance:</b>	
Form / Physical state:	Powder
Color:	Whitish
· <b>Odor:</b> Odorless	
· <b>Odor threshold:</b> Not applicable.	
· <b>pH-value:</b> 2–2.2	
· <b>Melting point/freezing point:</b> 182–187°C (359.6–368.6°F)	
· <b>Initial boiling point and boiling range:</b> 274°C (525.2°F)	
· <b>Flash point:</b> Not determined.	
· <b>Flammability (solid, gas):</b> Not determined.	
· <b>Ignition temperature:</b> 540°C (1004°F)	
· <b>Decomposition temperature:</b> Not determined.	
· <b>Auto-ignition temperature:</b> Product is not self-igniting.	
· <b>Danger of explosion:</b> Product does not present an explosion hazard. Product is not explosive. However, formation of explosive air mixtures is possible. The following applies in general to flammable organic substances / preparations: Dust explosion possible if in powder or granular form (fine distribution), mixed with air.	
· <b>Flammability or explosive limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Oxidizing properties:</b> none	
· <b>Vapor Pressure:</b> Not applicable.	
· <b>Density at 20°C (68°F):</b> 0.55 g/cm <sup>3</sup> (4.59 lbs/gal)	
· <b>Relative density:</b> Not determined.	
· <b>Vapor density:</b> Not applicable.	
· <b>Evaporation rate:</b> Not applicable.	
· <b>Solubility(ies)</b>	
Water at 20°C (68°F):	500 g/l Soluble.
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	
· <b>Viscosity:</b> Not applicable.	
· <b>Solids content:</b> 100.0 %	
· <b>Other information</b> No further relevant information available.	

### 10 Stability and reactivity

- **Reactivity** Dust can combine with air to form an explosive mixture.
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions** Reacts with oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** see section 5

— US —  
(Contd. on page 5)

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

Trade name: **DPD Indicator Powder**

(Contd. of page 4)

### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

Harmful if swallowed.

Harmful in contact with skin.

- **Acute toxicity estimate (ATE<sub>(MIX)</sub>) - Calculation method:**

Oral	GHS ATE <sub>(MIX)</sub>	497 mg/kg (.)
Dermal	GHS ATE <sub>(MIX)</sub>	1100 mg/kg (.)

- **LD/LC50 values that are relevant for classification:**

**CAS: 6283-63-2 N,N-Diethyl-p-phenylenediamine sulfate (1:1)**

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

- **Primary irritant effect:**

- **on the skin:** Causes skin irritation.

- **on the eye:** Causes serious eye irritation.

- **Information on components:** CAS 6283-63-2: DPD may cause allergic skin reaction

- **Sensitization:** Based on available data, the classification criteria are not met.

- **Information on components:** CAS 6283-63-2: Sensitization possible in predisposed persons.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

- **Other information:** see section 8 / 15

- **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

- **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.

- **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)

### 12 Ecological information

- **Toxicity**

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

- **Bacterial toxicity:** sulfates toxic > 2.5 g/l

- **Other information:**

Toxic for fish:

sulfates &gt; 7 g/l

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

- **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

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

(Contd. on page 6)

— US —

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

Trade name: DPD Indicator Powder

(Contd. of page 5)

**CAS: 6283-63-2 N,N-Diethyl-p-phenylenediamine sulfate (1:1)**

log Pow 2.24 (.) (calculated)

- **Mobility in soil** No further relevant information available.
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· UN-Number	
· DOT, IMDG, IATA	none
· UN proper shipping name	
· DOT, IMDG, IATA	none
· Transport hazard class(es)	
· DOT	
· Class	none
· Label	-
· IMDG, IATA	
· Class	none
· Packing group	
· DOT, IMDG, IATA	none
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

### 15 Regulatory information

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

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

Substance is not listed.

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

Substance is not listed.

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

CAS No. 6283-63-2 is listed under CAS No. 6065-27-6 1,4-Benzenediamine, N1,N1-diethyl-, sulfate (1:?)

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

Trade name: **DPD Indicator Powder**

(Contd. of page 6)

· <b>Chemicals known to cause reproductive toxicity for females:</b>
Substance is not listed.
· <b>Chemicals known to cause reproductive toxicity for males:</b>
Substance is not listed.
· <b>Chemicals known to cause developmental toxicity:</b>
Substance is not listed.
· <b>New Jersey Right-to-Know List:</b>
Substance is not listed.
· <b>New Jersey Special Hazardous Substance List:</b>
Substance is not listed.
· <b>Pennsylvania Right-to-Know List:</b>
Substance is not listed.
· <b>Pennsylvania Special Hazardous Substance List:</b>
Substance is not listed.
· <b>EPA (Environmental Protection Agency)</b>
Substance is not listed.
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
Substance is not 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.

· **Date of preparation / last revision** 10/15/2019 / 1

· **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  
 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  
 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  
 Acute Tox. 4: Acute toxicity – Category 4  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

(Contd. on page 8)

— US —

# Safety Data Sheet

acc. to OSHA HCS (HazCom 2012)

Printing date 10/15/2019

Reviewed on 10/10/2019

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**Trade name: DPD Indicator Powder**

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(Contd. of page 7)

- **Sources** Data arise from safety data sheets, reference works and literature.
- \* **Data compared to the previous version altered.**