

Material Safety Data Sheet According to 91/155 EEC

Printing date 17.12.2004

Reviewed on 17.12.2004

*** 1 Identification of substance:**



- **Product details:** Reagent for water analysis
- **Product name:** DPD 1 Reagent
- **Catalog number:** 471020, 471021, 471026
- **Supplier:**
Tintometer GmbH
Schleefstraße 8a-12
D - 44287 Dortmund
Made in Germany
- **Informing department:** Department Laboratory
- **Emergency information:**
Poison Center Berlin, Germany
phone: +49(0)30 19240

phone: +49(0)231 94510-0

*** 2 Composition/Data on components:**

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5 EC Number: 016-020-00-8	sulphuric acid	 C; R 35	10-20%
CAS: 6283-63-2 EINECS: 228-500-6	N,N-diethylbenzene-1,4-diammonium sulphate	 Xn; R 20/21/22-36	≤ 2.5%

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

*** 3 Hazards identification**

- **Hazard designation:**



Xi Irritant

- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 36/38 Irritating to eyes and skin.
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

*** 4 First aid measures**

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air and call for doctor for safety reasons.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.

(Contd. on page 2)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 17.12.2004

Reviewed on 17.12.2004

Product name: DPD 1 Reagent

(Contd. of page 1)

- **After eye contact**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
- **After swallowing**
Seek medical treatment.
Rinse out mouth and then drink plenty of water.
- **The following symptoms may occur:**
after inhalation:
coughing
mucous membrane irritation
breathing difficulty
After swallowing of large amounts:
Danger of gastric perforation.

* 5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
nitrous gases
Sulphur oxides (SO_x)
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.

* 6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
- **Measures for cleaning/collecting:**
Ensure adequate ventilation.
Neutralize with diluted sodium hydroxide solution or by throwing on lime sand, lime or sodium carbonate.
Absorb with liquid-binding material (sand, diatomite, universal binders).

* 7 Handling and storage

- **Handling**
- **Information for safe handling:** Keep away from heat and direct sunlight.
- **Information about protection against explosions and fires:**
Protect from heat.
The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Store away from metals.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store under dry conditions.
- **Storage class** Not required.

GB
(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 17.12.2004

Reviewed on 17.12.2004

Product name: DPD 1 Reagent

(Contd. of page 2)

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.
- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter B
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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**
Natural rubber, NR
PVC or PE gloves
nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Recommended thickness of the material: ≥ 0.11 mm
- **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Wert für die Permeation: Level = 6 (480 min)
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Light weight protective clothing

* 9 Physical and chemical properties:

· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	100°C
· Flash point:	Not applicable
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Vapour pressure at 20°C:	23.0 hPa
· Density at 20°C	1.095 g/cm ³
· Solubility in / Miscibility with Water:	Fully miscible
· pH-value at 20°C:	0.1
· Solvent content:	
Organic solvents:	0.0 %
Water:	< 90 %

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 17.12.2004

Reviewed on 17.12.2004

Product name: DPD 1 Reagent

(Contd. of page 3)

· Solids content:	> 1 %
--------------------------	-------

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - ammonia
 - alkalis
 - acids
 - metals
 - combustible substances
 - organic solvents
- **Dangerous reactions**
 - Corrosive action on metals
 - Reacts with metals forming hydrogen
 - Reacts with organic substances
- **Dangerous products of decomposition:**
 - nitrous gases
 - Sulphur oxides (SO_x)
 - see chapter 5

*11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
7664-93-9 sulphuric acid		
Oral	LD50	2140 (25%) mg/kg (rat)
Inhalative	LC 50	510 (pure) mg/m ³ /2h (rat)
6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate		
Oral	LD50	497 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
 - Irritant

*12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.
- **Ecotoxic effects:**

· Aquatic toxicity:	
7664-93-9 sulphuric acid	
Daphnia EC50	29 mg/l/24h (Daphnia magna)

- **Remark:**
 - Forms corrosive mixtures with water even if diluted.
 - Toxic for algae
- **Remark:** neutralization possible

(Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 17.12.2004

Reviewed on 17.12.2004

Product name: DPD 1 Reagent

(Contd. of page 4)

· General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms.

* 13 Disposal considerations

· Product:
· Recommendation Hand over to disposers of hazardous waste.

· European waste catalogue

16 05 06 | laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

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

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

* 14 Transport information

· Land transport ADR/RID (cross-border)

· ADR/RID-GGVS/E Class: 8 (C1) Corrosive substances.

· Kemler Number: 80

· UN-Number: 3264

· Packaging group: III

· Label 8

· Designation of goods: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)

· Maritime transport IMDG:

· IMDG Class: 8

· UN Number: 3264

· Label 8

· Packaging group: III

· EMS Number: F-A,S-B

· Marine pollutant: No

· Correct technical name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)

· Air transport ICAO-TI and IATA-DGR:

· ICAO/IATA Class: 8

· UN/ID Number: 3264

· Label 8

· Packaging group: III

(Contd. on page 6)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 17.12.2004

Reviewed on 17.12.2004

Product name: DPD 1 Reagent

(Contd. of page 5)

· Correct technical name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)

*15 Regulatory information

· Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

· Code letter and hazard designation of product:

Xi Irritant

· Risk phrases:

36/38 Irritating to eyes and skin.

· Safety phrases:

20 When using do not eat or drink.

23 Do not breathe fumes/aerosol.

25 Avoid contact with eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

60 This material and its container must be disposed of as hazardous waste.

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.

· Relevant R-phrases

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

35 Causes severe burns.

36 Irritating to eyes.

· Department issuing data specification sheet: Technical Department**· * Data compared to the previous version altered.**