



## Safety Data Sheet

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### 1. Identification of the substance/mixture and of the company/undertaking

**Product identifier:**

Product name: DPD Reagent

Product code(SDS NO): E0288E-1

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka 540-0029, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

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### 2. Hazards identification

**GHS classification and label elements of the product****Classification of the substance or mixture**

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

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### 3. Composition/information on ingredients

**Mixture/Substance selection:****Mixture**

Ingredient name: N,N-Diethyl-1,4-phenylenediamine sulfate

Content(%): 4.0

Chemical formula:  $(C_2H_5)_2NC_6H_4NH_2 \cdot H_2SO_4$ 

Chemicals No, Japan: 3-243

CAS No.: 6283-63-2

MW: 262.33

ECNO: 228-500-6

Ingredient name: Sodium sulfate

Content(%): 96

Chemical formula:  $Na_2SO_4$ 

Chemicals No, Japan: 1-501

CAS No.: 7757-82-6

MW: 142.04

ECNO: 231-820-9

Note : The figures shown above are not the specifications of the product.

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### 4. First-aid measures

**Descriptions of first-aid measures****IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

**IF ON SKIN (or hair)**

Take off immediately all contaminated clothing. Rinse skin with water/shower.



If skin irritation or rash occurs: Get medical advice/attention.

**IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

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**5. Fire-fighting measures**

## Extinguishing media

## Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

## Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

## Advice for firefighters

## Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

## Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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**6. Accidental release measures**

## Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

## Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

## Preventive measures for secondary accident

Collect spillage.

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**7. Handling and storage**

## Precautions for safe handling

## Preventive measures

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

## Exhaust/ventilator

Exhaust/ventilator should be available.

## Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

## Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

## Conditions for safe storage, including any incompatibilities

## Recommendation for storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.



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## 8. Exposure controls/personal protection

### Exposure controls

#### Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

#### Individual protection measures

##### Respiratory protection

Wear respiratory protection.

##### Hand protection

Wear protective gloves.

##### Eye protection

Wear eye/face protection.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

#### Physical properties

Appearance: Powder

Color: White

Odor data N.A.

#### Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point data N.A.

Decomposition temperature data N.A.

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Vapor density data N.A.

Specific gravity/Density data N.A.

n-Octanol /water partition coefficient data N.A.

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## 10. Stability and Reactivity

### Chemical stability

(N,N-Diethyl-1,4-phenylenediamine sulfate)

May be converted by the light.

### Possibility of hazardous reactions

(Sodium sulfate)

Decomposes on heating. This produces sulfur oxides and sodium oxides. (ICSC 0952)

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Oxidizing agents

### Hazardous decomposition products

Carbon oxides, Sulfur oxides, Nitrogen oxides, Sodium oxides



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**11. Toxicological Information**

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Company proprietary data]

(Sodium sulfate)

mouse LD50=5989mg/kg (RTECS)

Irritant properties

Serious eye damage /irritation

[Company proprietary data]

(N,N-Diethyl-1,4-phenylenediamine sulfate)

rabbit : category 2B ; 500mg/24h mild

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

No Teratogenic effects data available

No reproductive toxicity data available

No STOT-single/repeated exposure data available

No Aspiration hazard data available

Additional data

May cause lung disorders by massive inhalation of powdered substance.

-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

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**12. Ecological Information**

Ecotoxicity

No Aquatic toxicity data available

Water solubility

(Sodium sulfate)

very good (ICSC, 2005)

No Persistence and degradability data available

No Bioaccumulative potential data available

No Mobility in soil data available

Ozone depleting chemical data not available

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**13. Disposal considerations**

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

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**14. Transport Information**

Not applicable to UN NO.

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**15. Regulatory Information**

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

US major regulations

TSCA

N,N-Diethyl-1,4-phenylenediamine sulfate, Sodium sulfate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local



regulations.

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#### 16. Other information

The product is not applicable to GHS classifications.

##### Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO6182012)  
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2017 TLVs and BEIs. (ACGIH)  
<http://monographs.iarc.fr/ENG/Classification/index.php>  
Supplier's data/information  
Hazard Communication Standard – 2012

##### General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2016).