

# SDS

## SAFETY DATA SHEET

Oakwood Products, Inc  
730 Columbia HWY N  
Estill, SC 29918  
[www.oakwoodchemical.com](http://www.oakwoodchemical.com)

### Phone Numbers:

Product Information	803-739-8800
Transportation Emergency	800-451-8346
Outside the USA	760-602-8700

### MATERIAL IDENTIFICATION

NAME: **Benzidine**

CAS#: [92-87-5]

CAT#: 216429

For R&D use only.

### HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity, oral (Category 4)  
Acute toxicity, dermal (Category 3)  
Acute toxicity, inhalation (Category 1)  
Sensitisation, respiratory (Category 1)  
Respiratory tract irritation (Category 3)  
Carcinogenicity (Category 1A)  
Hazardous to the aquatic environment, long-term hazard (Category 1)

#### GHS Label elements, including precautionary statements

##### Pictograms



##### Signal Word

Danger

##### Hazard Statement(s)

H302	Harmful if swallowed
H311	Toxic in contact with skin
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H350	May cause cancer
H410	Very toxic to aquatic life with long lasting effects

##### Precautionary Statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312	IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P391	Collect spillage. Hazardous to the aquatic environment

## COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 4,4'-Diaminobiphenyl  
 Formula : C12H12N2  
 Molecular Weight : 184.24 g/mol

CAS	Description	Concentration
92-87-5	Benzidine	98%

## FIRST AID MEASURES

### In case of eye contact

Immediately flush eyes with running water for at least 15 minutes while keeping eyes open. Seek medical attention.

### In case of skin contact

Wash thoroughly with soap and plenty of water. Seek medical attention.

### If inhaled

Remove victim from source of exposure to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.

### If swallowed

Do not induce vomiting. Give water to victim to drink. Seek medical attention.

## FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Use carbon dioxide, dry chemical powder, alcohol-resistant or polymer foam.

### Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

### Unusual fire and explosion hazards/decomposition of product

emits toxic fumes under fire conditions.

## ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid breathing fumes, vapors, mists or gas. Ventilate area. Remove all sources of ignition. Evacuate personnel.

### Environmental precautions

Prevent further leakage if safe to do so.

### Methods and materials for containment and clean up

Absorb spills on sand or vermiculite and place in closed container for disposal.

## HANDLING AND STORAGE

### Precautions for safe handling

Avoid prolonged use. Avoid all direct contact with material. Do not breathe dust or vapor. Wash thoroughly after handling.

### Precautions for safe storage

Keep container tightly closed. Store in a cool, dry, well-ventilated area.

Light sensitive.

Moisture sensitive.

## EXPOSURE CONTROL/PERSONAL PROTECTION

### Exposure Limits:

		TWA	
Component Name (CAS)	Reference	ppm	mg/m3
Benzidine (92-87-5)	OSHA	—	—

### Personal protective equipment

#### Eye/face protection

Wear protective safety goggles or face shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

#### Hand/skin protection

Avoid all direct contact with product.

Wear chemical-resistant gloves.

Wear protective clothing and boots.

After contact with skin, wash immediately.

#### Respiratory protection

Ensure adequate ventilation during use. Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the exposure limits.

## PHYSICAL AND CHEMICAL PROPERTIES

Appearance	beige powder with lumps
Odour	no data available
Odour Threshold	no data available
Melting point/Freezing Point	no data available

Boiling Point	no data available
Flash Point	no data available
Evaporation Rate	no data available
Flammability (solid, gas)	no data available
Upper/Lower Flammability or Explosive limits	no data available
Vapour pressure	no data available
Relative Density	no data available
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Refractive Index	no data available

## STABILITY AND REACTIVITY

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

Light.

Moisture.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

May evolve carbon monoxide, carbon dioxide, and nitrogen oxides.

## TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**

Rat - 309 mg/kg

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitization**

May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

Repeated absorption may result in bladder tumors. This is or contains a component that has been

reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Human carcinogen.

**Reproductive toxicity**

no data available

**STOT-single exposure**

May cause respiratory irritation

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**Exposure Routes**

Harmful to skin, eyes, and respiratory system.

May be toxic if inhaled or swallowed.

**Signs and Symptoms of Exposure**

Liver injury may occur. Kidney injury may occur. Blood disorders, nausea, vomiting.

**Additional Information**

RTECS: DC9625000

To the best of our knowledge, the health hazards of this material have not been fully investigated.

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## ECOLOGICAL INFORMATION

**Toxicity**

Toxicity to fish:

LC50 - Oncorhynchus mykiss (rainbow trout) - 7.4 mg/l - 96.0h

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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## DISPOSAL CONSIDERATIONS

Dissolve in or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, State and local laws.

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## TRANSPORT INFORMATION

**DOT**

Benzidine  
6.1  
UN1885 II  
Reportable Quantity (RQ): 1 lbs

**IMDG**

Benzidine  
6.1  
UN1885 II  
EMS-No: F-A, S-A  
Marine Pollutant: Yes

**IATA**

Benzidine  
6.1  
UN1885 II

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## REGULATORY INFORMATION

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: The following chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313:

	<b>CAS</b>
Benzidine	92-87-5

**New Jersey Right to Know Components**

This product contains a chemical on the New Jersey Right to Know Components List.

	<b>CAS</b>
Benzidine	92-87-5

**California Prop. 65 Components**

WARNING! This product contains a chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm.

	<b>CAS</b>
Benzidine	92-87-5

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## OTHER INFORMATION

Version : 1.0

Revision Date : 5/23/2016

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Oakwood shall not be held liable for any damage resulting from handling or from contact with the above product.