

# Chemical Safety Data Sheet MSDS / SDS

## 2,2'-Benzidinedisulfonic acid

Revision Date:2024-12-21 Revision Number:1

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

#### Product identifier

Product name : 2,2'-Benzidinedisulfonic acid  
CBnumber : CB3732926  
CAS : 117-61-3  
EINECS Number : 204-200-0  
Synonyms : bdsa,2,2'-Benzidinedisulfonic acid

#### Relevant identified uses of the substance or mixture and uses advised against

#### Company Identification

Company : Apurva Chemicals Pvt Ltd  
Address : Plot No 2806, 2807/1 3<sup>rd</sup> Phase GIDC Vapi 396195 Gujarat India  
Telephone : +91 9925100332

### SECTION 2: Hazards identification

#### Classification of the substance or mixture

Skin sensitization, Sub-category 1A

Eye irritation, Category 2

#### Label elements

##### Pictogram(s)

□

Signal word : Warning

##### Hazard statement(s)

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

##### Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position 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.

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P405 Store locked up.

P501 Dispose of contents/container to.....

#### **Prevention**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P264 Wash ... thoroughly after handling.

#### **Response**

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

P333+P317 If skin irritation or rash occurs: Get medical help.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

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

#### **Storage**

none

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: 2,2'-Benzidinedisulfonic acid
Synonyms	: bdsa, 2,2'-Benzidinedisulfonic acid
CAS	: 117-61-3
EC number	: 204-200-0
MF	: C <sub>12</sub> H <sub>12</sub> N <sub>2</sub> O <sub>6</sub> S <sub>2</sub>
MW	: 344.36

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## SECTION 4: First aid measures

### **Description of first aid measures**

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately.

Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

**Most important symptoms and effects, both acute and delayed**

SYMPTOMS: Symptoms of exposure to this compound include eye irritation. ACUTE/CHRONIC HAZARDS: This chemical is an eye irritant.

When heated to decomposition it emits very toxic fumes of sulfur oxides and nitrogen oxides. (NTP, 1992)

**Indication of any immediate medical attention and special treatment needed**

no data available

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## SECTION 5: Firefighting measures

**Extinguishing media**

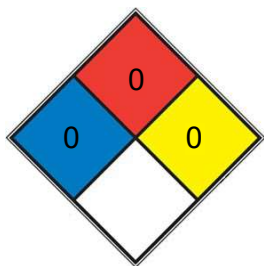
Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

**Specific Hazards Arising from the Chemical**

Flash point data for this chemical are not available; however, it is probably combustible. (NTP, 1992)

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**NFPA 704**

■ HEALTH 0

Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials

■ FIRE 0

Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

■ REACT 0

Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

- ☐ SPEC.
  - ☐ HAZ.
- 

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

no data available

#### Biological limit values

no data available

### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flamm resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Powder
Colour	Dark purple
Odour	no data available
Melting point/freezing point	277.18 °C. Remarks:Other details not available.
Boiling point or initial boiling point and boiling range	638.25 °C. Remarks:Other details not available.
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	85°C(lit.)
Auto-ignition temperature	Remarks:Does not catch fire at room temperature and pressure. Thereby, it can be inferred that the chemical is not autoflammable.
Decomposition temperature	no data available
pH	3.07. Remarks:Acidic.
Kinematic viscosity	no data available
Solubility	less than 1 mg/mL at 68° F (NTP, 1992)
Partition coefficient n-octanol/water	Pow = 12.66. Temperature:24 °C. Remarks:Log Pow = 1.102.
Vapour pressure	0 mm Hg. Temperature:25 °C. Remarks:3.24 E-018 mm Hg = 0.0000000000000000324 mmHg.
Density and/or relative density	0.775 g/cm3. Temperature:24 °C.
Relative vapour density	no data available
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

no data available

**Incompatible materials**

no data available

**Hazardous decomposition products**

no data available

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**SECTION 11: Toxicological information****Acute toxicity**

- Oral: LD50 - rat - 3 400 mg/kg bw. Remarks: Sex details not given.
- Inhalation: no data available
- Dermal: LD50 - rabbit - > 12 000 mg/kg bw.

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

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## SECTION 12: Ecological information

### Toxicity

Toxicity to fish: LC50 - *Poecilia reticulata* - 6.25 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 210 mg/L - 24 h.

Toxicity to algae: NOEC - *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*) - 6.746 mg/L - 72 h.

Toxicity to microorganisms: IG50 - *Tetrahymena pyriformis* - 269.161 mg/L.

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## **SECTION 15: Regulatory information**

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Not Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Not Listed.

#### **PICCS**

Not Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.



## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.