

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product name : 3,3'-Diaminobenzidine [for Biochemical Research]
CAS No. : 91-95-2

Manufacturer or supplier's details

Company : Heynova (Shanghai) New Material Technology CO., Ltd
Address : Building 3, No. 690 Bibo Road, Pudong New Area, Shanghai, China
Telephone : +86-178-2110-2608
E-mail address : info@heynovachem.com

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : Solid form
Color : yellow - orange
Suspected of causing genetic defects. May cause cancer.

GHS Classification

Germ cell mutagenicity : Category 2
Carcinogenicity : Category 1B

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H341 Suspected of causing genetic defects.
H350 May cause cancer.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Physical and chemical hazards

Not classified based on available information.

Health hazards

Suspected of causing genetic defects. May cause cancer.

Environmental hazards

Not classified based on available information.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	CAS RN	Concentration (% w/w)
3,3'-Diaminobenzidine	91-95-2	97

4. FIRST AID MEASURES

- If inhaled : Remove person to fresh air and keep comfortable for breathing.
Get medical advice/ attention.
- In case of skin contact : Take off all contaminated clothing immediately.
If on skin, rinse well with water.
Get medical advice/ attention.
- In case of eye contact : Rinse with plenty of water.
If easy to do, remove contact lens, if worn.
Get medical advice/ attention.
- If swallowed : Get medical advice/ attention.
Rinse mouth.
- Most important symptoms and effects, both acute and delayed : None known.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry powder, Foam, Water spray, Carbon dioxide (CO2)
- Specific hazards during fire fighting : No information available.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Immediately evacuate personnel to safe areas.
Remove undamaged containers from fire area if it is safe to do so.
- Special protective equipment for fire-fighters : Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.
Keep people away from and upwind of spill/leak.
Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
- Environmental precautions : Prevent product from entering drains.

Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.

7. HANDLING AND STORAGE

Handling

Technical measures : Prevent dispersion of dust.

Local/Total ventilation : Ensure adequate ventilation.
Handle product only in closed system or provide appropriate exhaust ventilation at machinery.
Use a local exhaust ventilation.

Advice on safe handling : Avoid contact with skin, eyes and clothing.
Wear personal protective equipment.
Wash hands and face thoroughly after handling.

Avoidance of contact : Oxidizing agents

Storage

Conditions for safe storage : Keep container tightly closed.
Store in a refrigerator.
Keep under inert gas.
Store locked up.
Avoid exposure to light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Install a closed system or local exhaust.
Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection : Dustproof gas mask
Self-contained breathing apparatus

Eye/face protection : Safety glasses
Safety goggles
Face-shield

Skin and body protection : Impervious protective clothing

Hand protection : Impervious gloves

*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Color : yellow - orange

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point	: 177 °C
Boiling point/boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Solubility(ies)	
Water solubility	: very slightly soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: 0.09
Autoignition temperature	: 560 °C
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Molecular weight	: 214.27 g/mol

10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: None under normal processing.
Conditions to avoid	: Heat. Exposure to air. Exposure to light.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: Carbon monoxide, Carbon dioxide (CO ₂), Nitrogen oxides (NO _x)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

3,3'-Diaminobenzidine:

Acute oral toxicity	: LDLo (Rat): 3 g/kg Assessment: The substance or mixture has no acute oral toxicity
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Acute inhalation toxicity	:	LCLo (Rat): 260 mg/m3 Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Skin corrosion/irritation	:	No information available.
Serious eye damage/eye irritation	:	No information available.
Respiratory or skin sensitization	:	No information available.
Germ cell mutagenicity		
<u>Product:</u>		
Germ cell mutagenicity - Assessment	:	Suspected of inducing heritable mutations in the germ cells of humans.
<u>Components:</u>		
3,3'-Diaminobenzidine:		
Germ cell mutagenicity - Assessment	:	Suspected of inducing heritable mutations in the germ cells of humans.
Carcinogenicity		
<u>Product:</u>		
Carcinogenicity - Assessment	:	Presumed to have carcinogenic potential for humans
<u>Components:</u>		
3,3'-Diaminobenzidine:		
Carcinogenicity - Assessment	:	Presumed to have carcinogenic potential for humans
Reproductive toxicity	:	No information available.
STOT-single exposure	:	No information available.
STOT-repeated exposure	:	No information available.
Repeated dose toxicity	:	No information available.
Aspiration toxicity	:	No information available.
RTECS No.	:	DV8750000 (3,3'-Diaminobenzidine)

12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Components:

3,3'-Diaminobenzidine:

Partition coefficient: n-octanol/water : 0.09

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Disposal in accordance with local and national regulations.
Entrust disposal to a licensed waste disposal company.

Contaminated packaging : Disposal in accordance with local and national regulations.
Before disposal of used container, remove contents completely.

14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable

IMDG-Code

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
EmS Code : Not applicable

Domestic regulation**GB 6944/12268**

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable

15. REGULATORY INFORMATION**Measures on the Environmental Administration of New Chemical Substances Registration**

Registration/Notification number : 0T29FS1MQ6

The ingredients of this product are reported in the following inventories:

CH BAGREG : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

AICS : Not in compliance with the inventory

DSL : None of the components of this product are on the Canadian DSL,
but all are on the NDSL

3,3'-Diaminobenzidine

ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory

16. OTHER INFORMATION

Revision Date : 2024/11/30
Date format : yyyy/mm/dd

Disclaimer

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.