

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

1 Identification

- **Product identifier**
- **Trade name:** *o-Phenylenediamine*
- **Article number:** 211675
- **CAS Number:**
95-54-5
- **EC number:**
202-430-6
- **Index number:**
612-145-00-2
- **Application of the substance / the mixture** *Laboratory chemicals for research and development*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BeanTown Chemical
9 Sagamore Park Road
Hudson, NH 03051
USA
-
- Phone: (603) 402-2234*
Fax: (603) 402-9713
Email: technical@beantownchem.com
www.beantownchem.com
- **Information department:** *Technical Support Department*
- **Emergency telephone number:**
During normal operating hours, please call (603) 402-2234
After hours, please call Chemtrec at (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

*Acute Tox. 3 H301 Toxic if swallowed.**Acute Tox. 1 H330 Fatal if inhaled.*

GHS08 Health hazard

*Muta. 2 H341 Suspected of causing genetic defects.**Carc. 2 H351 Suspected of causing cancer.*

GHS07

*Acute Tox. 4 H312 Harmful in contact with skin.**Eye Irrit. 2A H319 Causes serious eye irritation.**Skin Sens. 1 H317 May cause an allergic skin reaction.*

- **Label elements**

- **GHS label elements** *The substance is classified and labeled according to the Globally Harmonized System (GHS).*
(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: *o*-Phenylenediamine

(Contd. of page 1)

· **Hazard pictograms**· **Signal word** *Danger*· **Hazard-determining components of labeling:***o*-phenylenediamine· **Hazard statements***Toxic if swallowed.**Harmful in contact with skin.**Fatal if inhaled.**Causes serious eye irritation.**May cause an allergic skin reaction.**Suspected of causing genetic defects.**Suspected of causing cancer.*· **Precautionary statements***If swallowed: Immediately call a poison center/doctor.**Rinse mouth.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Specific treatment is urgent (see on this label).**Take off contaminated clothing and wash it before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**· **CAS No. Description**95-54-5 *o*-phenylenediamine· **Identification number(s)**· **EC number:** 202-430-6· **Index number:** 612-145-00-2

4 First-aid measures

· **Description of first aid measures**· **General information:***Immediately remove any clothing soiled by the product.**Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.**Remove breathing apparatus only after contaminated clothing have been completely removed.**In case of irregular breathing or respiratory arrest provide artificial respiration.*· **After inhalation:***Supply fresh air or oxygen; call for doctor.*

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: *o*-Phenylenediamine

(Contd. of page 2)

- In case of unconsciousness place patient stably in side position for transportation.*
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**0.3 mg/m³· **PAC-2:**35 mg/m³· **PAC-3:**210 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: o-Phenylenediamine

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

95-54-5 o-phenylenediamine

TLV Long-term value: 0.1 mg/m³

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:

Solid

Color:

Not determined.

- **Odor:**

Characteristic

- **Odor threshold:**

Not determined.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: *o*-Phenylenediamine

(Contd. of page 4)

· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	98-102 °C (208.4-215.6 °F)
Boiling point/Boiling range:	256-258 °C (492.8-496.4 °F)
· Flash point:	136 °C (276.8 °F)
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	1.5 Vol %
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density at 20 °C (68 °F):	1.03 g/cm ³ (8.59535 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water at 20 °C (68 °F):	40 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
VOC content:	0.00 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: *o*-Phenylenediamine

(Contd. of page 5)

11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****95-54-5 o-phenylenediamine**

Oral LD50 1,070 mg/kg (rat)

Inhalative LC50/4 h 1,873 mg/l (rat)

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** Irritating effect.· **Sensitization:** Sensitization possible through skin contact.· **Additional toxicological information:**· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

2B

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

12 Ecological information

· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:**

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: o-Phenylenediamine

(Contd. of page 6)

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

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN1673
· UN proper shipping name	
· DOT	Phenylenediamines
· IMDG, IATA	PHENYLENEDIAMINES
· Transport hazard class(es)	
· DOT, IMDG, IATA	
· Class	6.1 Toxic substances
· Label	6.1
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Toxic substances
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN 1673 PHENYLENEDIAMINES, 6.1, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	No further relevant information available.
· Sara	
· Section 355 (extremely hazardous substances):	
	Substance is not listed.
· Section 313 (Specific toxic chemical listings):	
	Substance is listed.
· TSCA (Toxic Substances Control Act):	
	ACTIVE
· Hazardous Air Pollutants	
	Substance is not listed.
· Proposition 65	
· Chemicals known to cause cancer:	
	Substance is listed.
· Chemicals known to cause reproductive toxicity for females:	
	Substance is not listed.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: *o*-Phenylenediamine

(Contd. of page 7)

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value)**

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **RTECS**

Substance is not listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **NFPA ratings (scale 0-4)**

Health = 2

Fire = 1

Reactivity = 0

· **HMIS ratings (scale 0-4)**

Health = 2

Fire = 1

Reactivity = 0

· **Department issuing SDS:** Technical Support Department· **Contact:** Technical Support Department· **Date of preparation / last revision** 07/09/2024 / -· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 1: Acute toxicity – Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/09/2024

Reviewed on 07/08/2024

Trade name: o-Phenylenediamine*Muta. 2: Germ cell mutagenicity – Category 2*
Carc. 2: Carcinogenicity – Category 2

(Contd. of page 8)

US