

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/28/2015

Reviewed on 05/28/2015

1 Identification

- **Product identifier**
- **Trade name:** biphenyl-3,3',4,4'-tetrayltetraamine
- **Article number:** 13060
- **CAS Number:**
91-95-2
- **EC number:**
202-110-6
- **Index number:**
612-239-00-3
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Toxic

Carc. Cat. 2

May cause cancer.



Harmful

Possible risk of irreversible effects.

Muta. Cat. 3

- **Information concerning particular hazards for human and environment:** Not applicable.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

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Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

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· **Code letter and hazard designation of product:**



Carc. Cat. 2, Muta. Cat. 3
Toxic

· **Risk phrases:**

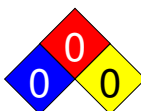
May cause cancer.
Possible risk of irreversible effects.

· **Safety phrases:**

Avoid exposure - obtain special instructions before use.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *0
Fire = 0
Reactivity = 0

· **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**

91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine

· **Identification number(s)**

· **EC number:** 202-110-6

· **Index number:** 612-239-00-3

4 First-aid measures

· **Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult 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.

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Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **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.

7 Handling and storage

- **Precautions for safe handling** 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.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **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.
- **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.

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Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

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· **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

· **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: 172-174 °C (342-345 °F)
Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.
Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density:** Not determined.

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Safety Data Sheet

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Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

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- | | |
|---|--|
| · Vapour density | Not applicable. |
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with Water: | Not determined. |
| · Partition coefficient (n-octanol/water): Not determined. | |
| · Viscosity: | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **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.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **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.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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USA

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Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

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

14 Transport information

- | | |
|--|-----------------|
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Sara**
 - **Section 355 (extremely hazardous substances):** Substance is not listed.
 - **Section 313 (Specific toxic chemical listings):** Substance is not listed.
 - **TSCA (Toxic Substances Control Act):** Substance is listed.
 - **Proposition 65**
 - **Chemicals known to cause cancer:** Substance is not listed.
 - **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
 - **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 established by ACGIH)** Substance is not listed.
 - **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
 - **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.
 - **Hazard symbols:**
- 

Carc. Cat. 2, Muta. Cat. 3
Toxic
- **Risk phrases:**
May cause cancer.
Possible risk of irreversible effects.
 - **Safety phrases:**
Avoid exposure - obtain special instructions before use.

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Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

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In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **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.

· **Date of preparation / last revision** 05/28/2015 / -

· **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 1B: Carcinogenicity, Hazard Category 1B

USA

Safety data sheet
according to 1907/2006/EC, Article 31



Printing date 28.05.2015

Revision: 28.05.2015

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

- **Product identifier**
- **Trade name:** biphenyl-3,3',4,4'-tetrayltetraamine
- **Article number:** 13060
- **CAS Number:**
91-95-2
- **EC number:**
202-110-6
- **Index number:**
612-239-00-3
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  **Toxic**
Carc. Cat. 2
May cause cancer.
-  **Harmful**
Possible risk of irreversible effects.
- Muta. Cat. 3
- **Information concerning particular hazards for human and environment:** Not applicable.

(Contd. on page 2)

AU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 1)

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Carc. Cat. 2, Muta. Cat. 3
Toxic

- **Risk phrases:**

May cause cancer.

Possible risk of irreversible effects.

- **Information concerning particular hazards for human and environment:**

- **Safety phrases:**

Avoid exposure - obtain special instructions before use.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine

- **Identification number(s)**

- **EC number:** 202-110-6

- **Index number:** 612-239-00-3

4 First aid measures

- **Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Generally the product does not irritate the skin.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:** If symptoms persist consult 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 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** No further relevant information available.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **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.

7 Handling and storage

- **Precautions for safe handling** Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making 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.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **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.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

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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
Colour:	Not determined.
Odour:	Characteristic
Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range:	172-174 °C
Boiling point/Boiling range:	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Self-igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not applicable.

Density:	Not determined.
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.

· **Solubility in / Miscibility with water:** Not determined.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 4)

Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **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.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitisation:** No sensitising effects known.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. Cat. 2, Muta. Cat. 3

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **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 together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

AU

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015


Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

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14 Transport information

- **Environmental hazards:**
- **Marine pollutant:** *No*
- **Special precautions for user** *Not applicable.*
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Australian Inventory of Chemical Substances** *Substance is not listed.*
- **Standard for the Uniform Scheduling of Medicines and Poisons** *Substance is not listed.*
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**
 *Carc. Cat. 2, Muta. Cat. 3
Toxic*
- **Risk phrases:**
*May cause cancer.
Possible risk of irreversible effects.*
- **Safety phrases:**
*Avoid exposure - obtain special instructions before use.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).*
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
- **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.

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1 Identification

- **Product identifier**
- **Trade name:** biphenyl-3,3',4,4'-tetrayltetraamine
- **Article number:** 13060
- **CAS Number:**
91-95-2
- **EC number:**
202-110-6
- **Index number:**
612-239-00-3
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Toxic

Carc. Cat. 2

May cause cancer.



Harmful

Possible risk of irreversible effects.

Muta. Cat. 3

- **Information concerning particular hazards for human and environment:** Not applicable.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 2)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/28/2015

Reviewed on 05/28/2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 1)

· **Code letter and hazard designation of product:**



Carc. Cat. 2, Muta. Cat. 3
Toxic

· **Risk phrases:**

May cause cancer.
Possible risk of irreversible effects.

· **Safety phrases:**

Avoid exposure - obtain special instructions before use.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **Hazard description:**

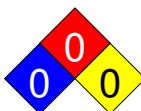
· **WHMIS-symbols:**

D2A - Very toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *0
Fire = 0
Reactivity = 0

· **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**

91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine

· **Identification number(s)**

· **EC number:** 202-110-6

· **Index number:** 612-239-00-3

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

(Contd. on page 3)

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acc. to OSHA HCS

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Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

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- **After swallowing:** *If symptoms persist consult 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:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** *Not required.*
- **Environmental precautions:** *No special measures required.*
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **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.

7 Handling and storage

- **Precautions for safe handling** *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.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see item 7.*
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** *Not required.*
- **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.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 05/28/2015

Reviewed on 05/28/2015

Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

(Contd. of page 3)

· **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
· Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range:	172-174 °C
Boiling point/Boiling range:	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

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CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/28/2015

Reviewed on 05/28/2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 4)

· Vapor pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Not determined.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **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.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **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.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.

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CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/28/2015

Reviewed on 05/28/2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 5)

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

14 Transport information

- | | |
|--|-----------------|
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **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 established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is not listed.
- **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.

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Safety Data Sheet

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Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

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· **Hazard symbols:**



Carc. Cat. 2, Muta. Cat. 3
Toxic

· **Risk phrases:**

May cause cancer.
Possible risk of irreversible effects.

· **Safety phrases:**

Avoid exposure - obtain special instructions before use.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **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.

· **Date of preparation / last revision** 05/28/2015 / -

· **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B

CA

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

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

- **1.1 Product identifier**
- **Trade name:** biphenyl-3,3',4,4'-tetrayltetraamine
- **Article number:** 13060
- **CAS Number:**
91-95-2
- **EC number:**
202-110-6
- **Index number:**
612-239-00-3
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.
Carc. 1B H350 May cause cancer.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard statements**
H341 Suspected of causing genetic defects.
H350 May cause cancer.
- **Precautionary statements**
P281 Use personal protective equipment as required.
P201 Obtain special instructions before use.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 1)

- P202 Do not handle until all safety precautions have been read and understood.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine
- **Identification number(s)**
- **EC number:** 202-110-6
- **Index number:** 612-239-00-3

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **6.4 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.

GB

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

(Contd. of page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** *Open and handle receptacle with care.*
- **Information about fire - and explosion protection:** *Keep respiratory protective device available.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** *No further data; see item 7.*
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *The lists valid during the making were used as basis.*
- **8.2 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.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **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

GB

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

(Contd. of page 3)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solid
Colour:	Not determined.
Odour:	Characteristic
Odour threshold:	Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range:	172-174 °C
Boiling point/Boiling range:	Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with water:

Not determined.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No dangerous reactions known.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: *biphenyl-3,3',4,4'-tetrayltetraamine*

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· **10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitisation:** *No sensitising effects known.*
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Muta. 2, Carc. 1B

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **12.2 Persistence and degradability** *No further relevant information available.*
- **12.3 Bioaccumulative potential** *No further relevant information available.*
- **12.4 Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:** *Not known to be hazardous to water.*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **12.6 Other adverse effects** *No further relevant information available.*

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*

SECTION 14: Transport information

- **14.5 Environmental hazards:**
- **Marine pollutant:** *No*
- **14.6 Special precautions for user** *Not applicable.*
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*

GB

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.05.2015

Revision: 28.05.2015

Trade name: biphenyl-3,3',4,4'-tetrayltetraamine

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
- **15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

SECTION 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.

- **Abbreviations and acronyms:**
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 28.05.2015

Herziening van: 28.05.2015

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** bifenyl-3,3',4,4'-tetrayltetraamine
- **Artikelnummer:** 13060
- **CAS-nummer:**
91-95-2
- **EC-nummer:**
202-110-6
- **Catalogusnummer:**
612-239-00-3
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstreker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Aurion**
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS08 gezondheidsgevaar

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 1B H350 Kan kanker veroorzaken.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
De stof/product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.
- **Gevarenpictogrammen**



GHS08

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 28.05.2015

Herziening van: 28.05.2015

Handelsnaam: bifenyl-3,3',4,4'-tetrayltetraamine

(Vervolg van blz. 1)

- **Signaalwoord** Gevaar
- **Gevarenaanduidingen**
 - H341 Verdacht van het veroorzaken van genetische schade.
 - H350 Kan kanker veroorzaken.
- **Voorzorgsmaatregelen**
 - P281 De nodige persoonlijke beschermingsuitrusting gebruiken.
 - P201 Alvorens te gebruiken de speciale aanwijzingen raadplegen.
 - P202 Pas gebruiken nadat u alle veiligheidsvoorschriften gelezen en begrepen heeft.
 - P308+P313 NA (mogelijke) blootstelling: een arts raadplegen.
 - P405 Achter slot bewaren.
 - P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.
- **2.3 Andere gevaren**
- **Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

- **3.1 Chemische karakterisering: Stoffen**
- **CAS-Nr. omschrijving**
91-95-2 bifenyl-3,3',4,4'-tetrayltetraamine
- **Identificatienummer(s)**
- **EC-nummer:** 202-110-6
- **Catalogusnummer:** 612-239-00-3

RUBRIEK 4: Eerstehulpmaatregelen

- **4.1 Beschrijving van de eerstehulpmaatregelen**
- **Na het inademen:** Frisse lucht toedienen; bij klachten arts ontbieden.
- **Na huidcontact:** Over het algemeen is het produkt niet prikkelend voor de huid
- **Na oogcontact:** Ogen bij geopend ooglid meerdere minuten met stromend water spoelen
- **Na inslikken:** Als de klachten niet minderen, een arts raadplegen
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**
Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:**
CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 28.05.2015

Herziening van: 28.05.2015

Handelsnaam: *bifenyl-3,3',4,4'-tetrayltetraamine*

(Vervolg van blz. 2)

- **6.2 Milieuvorzorgsmaatregelen:** *Geen speciale maatregelen noodzakelijk.*
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:** *Besmet materiaal zoals afval volgens punt 13 verwijderen.*
- **6.4 Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Tanks voorzichtig openen en behandelen.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** *Ademhalingstoestellen gereedhouden.*
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** *Geen bijzondere eisen.*
- **Informatie m.b.t. gezamenlijke opslag:** *Niet noodzakelijk.*
- **Verdere inlichtingen over eisen m.b.t. de opslag:** *Geen.*
- **7.3 Specifiek eindgebruik** *Geen verdere relevante informatie verkrijgbaar.*

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** *Geen aanvullende gegevens. Zie 7.*
- **8.1 Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:** *Vervalt.*
- **Aanvullende gegevens:** *Als basis dienden lijsten die bij opstelling geldig waren.*
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Beschermende kleding afzonderlijk bewaren.
- **Ademhalingsbescherming:**
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

- Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.*
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.
- **Handschoenmateriaal**
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant.
 - **Doordringingstijd van het handschoenmateriaal**
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 28.05.2015

Herziening van: 28.05.2015

Handelsnaam: *bifenyl-3,3',4,4'-tetrayltetraamine*

(Vervolg van blz. 3)

· **Oogbescherming:**

Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

· **9.1 Informatie over fysische en chemische basiseigenschappen**· **Algemene gegevens**· **Voorkomen:**

Vorm:	Vast
Kleur:	Niet bepaald.
Reuk:	Karakteristiek
Geurdrempelwaarde:	Niet bepaald.

· **pH-waarde:** Niet bruikbaar.· **Toestandsverandering**

Smeltpunt/smeltbereik:	172-174 °C
Kookpunt/kookpuntbereik:	Niet bepaald.

· **Vlampunt:** Niet bruikbaar.· **Ontvlambaarheid (vast, gasvormig):** De stof is niet ontvlambaar.· **Ontstekingstemperatuur:****Ontbindingstemperatuur:** Niet bepaald.· **Zelfonsteking:** Niet bepaald.· **Ontploffingsgevaar:** Het produkt is niet ontploffingsgevaarlijk.· **Ontploffingsgrenzen:**

Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.

· **Dampspanning:** Niet bruikbaar.**Dichtheid:** Niet bepaald.· **Relatieve dichtheid** Niet bepaald.· **Dampdichtheid** Niet bruikbaar.· **Verdampingsnelheid** Niet bruikbaar.· **Oplosbaarheid in/mengbaarheid met****Water:** Niet bepaald.· **Verdelingscoëfficiënt (n-octanol/water):** Niet bepaald.· **Viscositeit****Dynamisch:** Niet bruikbaar.**Kinematisch:** Niet bruikbaar.· **9.2 Overige informatie** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 5)

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(Vervolg van blz. 4)

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit**
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit:**
- **Primaire aandoening:**
- **op de huid:** Geen prikkelend effect.
- **aan het oog:** Geen prikkelend effect.
- **Overgevoeligheid:** Geen effect van overgevoeligheid bekend.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
Muta. 2, Carc. 1B

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL) 3: Kan kanker veroorzaken.
Geen gevaar voor water bekend.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.5 Milieugevaren:**
- **Marine pollutant:** *Neen*

(Vervolg op blz. 6)

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(Vervolg van blz. 5)

· **14.6 Bijzondere voorzorgen voor de gebruiker** Niet bruikbaar.

· **14.7 Vervoer in bulk overeenkomstig bijlage II bij MARPOL 73/78 en de IBC-code** Niet bruikbaar.

RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**
- **SZW-lijst van kankerverwekkende stoffen** De stof is aanwezig.
- **SZW-lijst van mutagene stoffen** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding** De stof is niet aanwezig.
- **Nationale voorschriften:**
- **Aanwijzingen m.b.t. tewerkstellingsbeperking:**
Werknemers mogen aan deze gevaarlijke stof niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 3: Saneringsinspanning A
- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

- **Afkortingen en acroniemen:**
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 28.05.2015

Révision: 28.05.2015

SECTION 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** biphényle-3,3',4,4'-tétraalyltétraamine
- **Code du produit:** 13060
- **No CAS:**
91-95-2
- **Numéro CE:**
202-110-6
- **Numéro index:**
612-239-00-3
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS08 danger pour la santé

Muta. 2 H341 Susceptible d'induire des anomalies génétiques.
Carc. 1B H350 Peut provoquer le cancer.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** La substance est classifiée et étiquetée selon le règlement CLP.
- **Pictogrammes de danger**



GHS08

- **Mention d'avertissement** Danger
- **Mentions de danger**
H341 Susceptible d'induire des anomalies génétiques.
H350 Peut provoquer le cancer.
- **Conseils de prudence**
P281 Utiliser l'équipement de protection individuel requis.
P201 Se procurer les instructions avant utilisation.
P202 Ne pas manipuler avant d'avoir lu et compris toutes les précautions de sécurité.

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P308+P313 EN CAS d'exposition prouvée ou suspectée: consulter un médecin.

P405 Garder sous clef.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

- **2.3 Autres dangers**
- **Résultats des évaluations PBT et vPvB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.

SECTION 3: Composition/informations sur les composants

- **3.1 Caractérisation chimique: Substances**
- **No CAS Désignation**
91-95-2 biphényle-3,3',4,4'-tétrayltétraamine
- **Code(s) d'identification**
- **Numéro CE:** 202-110-6
- **Numéro index:** 612-239-00-3

SECTION 4: Premiers secours

- **4.1 Description des premiers secours**
- **Après inhalation:** Donner de l'air frais, consulter un médecin en cas de troubles.
- **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.
- **Après contact avec les yeux:**
Rincer les yeux, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.
- **Après ingestion:** Si les troubles persistent, consulter un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**
Pas d'autres informations importantes disponibles.

SECTION 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:**
CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

SECTION 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:** Aucune mesure particulière n'est requise.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
- **6.4 Référence à d'autres sections**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

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Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

SECTION 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**
Ouvrir et manipuler les récipients avec précaution.
- **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Néant.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

SECTION 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.
- **8.1 Paramètres de contrôle**
- **Composants présentant des valeurs-seuil à surveiller par poste de travail:** Néant
- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Équipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail.
Conserver à part les vêtements de protection.
- **Protection respiratoire:**
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

- Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.
- **Matériau des gants**
Le choix de gants appropriés ne dépend pas seulement du matériau, mais également d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre.
 - **Temps de pénétration du matériau des gants**
Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

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· **Protection des yeux:**

Lunettes de protection hermétiques

SECTION 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**· **Indications générales**· **Aspect:**

· Forme:	Solide
· Couleur:	Non déterminé.
· Odeur:	Caractéristique
· Seuil olfactif:	Non déterminé.

· **valeur du pH:** Non applicable.· **Changement d'état**

· Point de fusion:	172-174 °C
· Point d'ébullition:	Non déterminé.

· **Point d'éclair** Non applicable.· **Inflammabilité (solide, gazeux):** La substance n'est pas inflammable.· **Température d'inflammation:**· **Température de décomposition:** Non déterminé.· **Auto-inflammation:** Non déterminé.· **Danger d'explosion:** Le produit n'est pas explosif.· **Limites d'explosion:**

· Inférieure:	Non déterminé.
· Supérieure:	Non déterminé.

· **Pression de vapeur:** Non applicable.· **Densité:** Non déterminée.· **Densité relative** Non déterminé.· **Densité de vapeur.** Non applicable.· **Vitesse d'évaporation** Non applicable.· **Solubilité dans/miscibilité avec l'eau:**

Non déterminé.

· **Coefficient de partage (n-octanol/eau):** Non déterminé.· **Viscosité:**· **Dynamique:** Non applicable.· **Cinématique:** Non applicable.· **9.2 Autres informations** Pas d'autres informations importantes disponibles.

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SECTION 10: Stabilité et réactivité

- **10.1 Réactivité**
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

SECTION 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë:**
- **Effet primaire d'irritation:**
- **de la peau:** Pas d'effet d'irritation.
- **des yeux:** Pas d'effet d'irritation.
- **Sensibilisation:** Aucun effet de sensibilisation connu.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
Muta. 2, Carc. 1B

SECTION 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:** Aucune pollution des eaux connue.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

SECTION 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

SECTION 14: Informations relatives au transport

- **14.5 Dangers pour l'environnement:**
- **Marine Pollutant:** Non

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· **14.6 Précautions particulières à prendre par l'utilisateur** *Non applicable.*

· **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol 73/78 et au recueil IBC** *Non applicable.*

SECTION 15: Informations réglementaires

· **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**

· **Prescriptions nationales:**

· **Indications sur les restrictions de travail:**

Le personnel ne doit pas être exposé à cette substance dangereuse. Les autorités peuvent autoriser des exceptions dans des cas particuliers.

· **15.2 Évaluation de la sécurité chimique:** *Une évaluation de la sécurité chimique n'a pas été réalisée.*

SECTION 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· **Acronymes et abréviations:**

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 1B: Carcinogenicity, Hazard Category 1B

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 28.05.2015

überarbeitet am: 28.05.2015

ABSCHNITT 1: Bezeichnung des Stoffs bzw. des Gemischs und des Unternehmens

· **1.1 Produktidentifikator**

· **Handelsname:** Biphenyl-3,3',4,4'-tetrayltetramin

· **Artikelnummer:** 13060

· **CAS-Nummer:**

91-95-2

· **EG-Nummer:**

202-110-6

· **Indexnummer:**

612-239-00-3

· **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**

Keine weiteren relevanten Informationen verfügbar.

· **Verwendung des Stoffes / des Gemisches** Laborchemikalien

· **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**

· **Hersteller/Lieferant:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Science Services GmbH

Unterhachinger Str. 75

81737 München Germany

Tel: +49(0)89 18 93 668-0

safety@scienceservices.de

24h Giftnotruf Munchen: +49 (0)89 19240

Toxikologische Abteilung der II. Medizinischen Klinik

rechts der Isar, Munchen. - www.toxinfo.org

· **Auskunftgebender Bereich:** Product safety department

· **1.4 Notrufnummer:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

· **2.1 Einstufung des Stoffs oder Gemischs**

· **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS08 Gesundheitsgefahr

Muta. 2 H341 Kann vermutlich genetische Defekte verursachen.

Carc. 1B H350 Kann Krebs erzeugen.

· **2.2 Kennzeichnungselemente**

· **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**

Der Stoff ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

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Sicherheitsdatenblatt

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Handelsname: Biphenyl-3,3',4,4'-tetrayltetramin

(Fortsetzung von Seite 1)

· Gefahrenpiktogramme


GHS08

· Signalwort Gefahr
· Gefahrenhinweise
H341 Kann vermutlich genetische Defekte verursachen.
H350 Kann Krebs erzeugen.
· Sicherheitshinweise
P281 Vorgeschriebene persönliche Schutzausrüstung verwenden.
P201 Vor Gebrauch besondere Anweisungen einholen.
P202 Vor Gebrauch alle Sicherheitshinweise lesen und verstehen.
P308+P313 BEI Exposition oder falls betroffen: Ärztlichen Rat einholen/ärztliche Hilfe hinzuziehen.
P405 Unter Verschluss aufbewahren.
P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.
· Zusätzliche Angaben:
Nur für gewerbliche Anwender.
· 2.3 Sonstige Gefahren
· Ergebnisse der PBT- und vPvB-Beurteilung
· PBT: Nicht anwendbar.

· vPvB: Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.1 Chemische Charakterisierung: Stoffe
· CAS-Nr. Bezeichnung
91-95-2 Biphenyl-3,3',4,4'-tetrayltetramin
· Identifikationsnummer(n)
· EG-Nummer: 202-110-6

· Indexnummer: 612-239-00-3

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen
· Nach Einatmen: Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.

· Nach Hautkontakt: Im allgemeinen ist das Produkt nicht hautreizend.

· Nach Augenkontakt: Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.

· Nach Verschlucken: Bei anhaltenden Beschwerden Arzt konsultieren.

· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen
Keine weiteren relevanten Informationen verfügbar.
· 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung
Keine weiteren relevanten Informationen verfügbar.

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ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:**
CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:** Keine besonderen Maßnahmen erforderlich.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung Behälter mit Vorsicht öffnen und handhaben.**
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Keine.
- **Lagerklasse:**
- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**
- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:** Entfällt.
- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Beschmutzte, getränkte Kleidung sofort ausziehen.
Vor den Pausen und bei Arbeitsende Hände waschen.

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Getrennte Aufbewahrung der Schutzkleidung.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

Form:	Fest
Farbe:	Nicht bestimmt.
Geruch:	Charakteristisch
Geruchsschwelle:	Nicht bestimmt.

· **pH-Wert:** Nicht anwendbar.

· **Zustandsänderung**

Schmelzpunkt/Schmelzbereich:	172-174 °C
Siedepunkt/Siedebereich:	Nicht bestimmt.

· **Flammpunkt:** Nicht anwendbar.

· **Entzündlichkeit (fest, gasförmig):** Der Stoff ist nicht entzündlich.

· **Zündtemperatur:**

Zersetzungstemperatur: Nicht bestimmt.

· **Selbstentzündlichkeit:** Nicht bestimmt.

· **Explosionsgefahr:** Das Produkt ist nicht explosionsgefährlich.

· **Explosionsgrenzen:**

Untere: Nicht bestimmt.

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Obere:	Nicht bestimmt.
· Dampfdruck:	Nicht anwendbar.
· Dichte:	Nicht bestimmt.
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht anwendbar.
· Verdampfungsgeschwindigkeit	Nicht anwendbar.
· Löslichkeit in / Mischbarkeit mit Wasser:	Nicht bestimmt.
· Verteilungskoeffizient (n-Octanol/Wasser):	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht anwendbar.
Kinematisch:	Nicht anwendbar.
· 9.2 Sonstige Angaben	Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität**
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität:**
- **Primäre Reizwirkung:**
- **an der Haut:** Keine Reizwirkung.
- **am Auge:** Keine Reizwirkung.
- **Sensibilisierung:** Keine sensibilisierende Wirkung bekannt.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
Muta. 2, Carc. 1B

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:** Keine Wassergefährdung bekannt.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

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· **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

ABSCHNITT 14: Angaben zum Transport

- | | |
|---|------------------|
| · 14.5 Umweltgefahren: | |
| · Marine pollutant: | Nein |
| · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender | Nicht anwendbar. |
| · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code | Nicht anwendbar. |

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Nationale Vorschriften:**
- **Hinweise zur Beschäftigungsbeschränkung:**
Arbeitnehmer dürfen diesem Gefahrstoff nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Abkürzungen und Akronyme:**
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B

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SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** bifenil-3,3',4,4'-tetraaitetraammina
- **Articolo numero:** 13060
- **Numero CAS:**
91-95-2
- **Numeri CE:**
202-110-6
- **Numero indice:**
612-239-00-3
- **1.2 Usi pertinenti identificati della sostanza o miscela e usi sconsigliati** Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Società Italiana Chimici**
Via Rio Nell Ellba 140
00138 Rome, Italy
Tel: 39 06 8800211
Fax: 39 30 06 8815313
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **1.4 Numero telefonico di emergenza:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

- **2.1 Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS08 pericolo per la salute

- Muta. 2 H341 Sospettato di provocare alterazioni genetiche.
- Carc. 1B H350 Può provocare il cancro.

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**
La sostanza è classificata ed etichettata conformemente al regolamento CLP.
- **Pittogrammi di pericolo**



GHS08

- **Avvertenza Pericolo**

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- **Indicazioni di pericolo**

H341 Sospettato di provocare alterazioni genetiche.

H350 Può provocare il cancro.

- **Consigli di prudenza**

P281 Utilizzare il dispositivo di protezione individuale richiesto.

P201 Procurarsi istruzioni specifiche prima dell'uso.

P202 Non manipolare prima di avere letto e compreso tutte le avvertenze.

P308+P313 IN CASO di esposizione o di possibile esposizione, consultare un medico.

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

- **2.3 Altri pericoli**

- **Risultati della valutazione PBT e vPvB**

- **PBT:** Non applicabile.

- **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

- **3.1 Caratteristiche chimiche: Sostanze**

- **Numero CAS**

91-95-2 bifenil-3,3',4,4'-tetraaitetraammina

- **Numero/i di identificazione**

- **Numeri CE:** 202-110-6

- **Numero indice:** 612-239-00-3

SEZIONE 4: Misure di primo soccorso

- **4.1 Descrizione delle misure di primo soccorso**

- **Inalazione:** Portare in zona ben areata, in caso di disturbi consultare il medico.

- **Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.

- **Contatto con gli occhi:** Lavare con acqua corrente per alcuni minuti tenendo le palpebre ben aperte.

- **Ingestione:** Se il dolore persiste consultare il medico.

- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

- **4.3 Indicazione della eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**
Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**

- **Mezzi di estinzione idonei:**

CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.

- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.

- **6.2 Precauzioni ambientali:** Non sono richiesti provvedimenti particolari.

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- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Smaltimento del materiale contaminato conformemente al punto 13.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura** *Aprire e manipolare i recipienti con cautela.*
- **Indicazioni in caso di incendio ed esplosione:** *Tener pronto il respiratore.*
- **7.2 Condizioni per l'immagazzinamento sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** *Non sono richiesti requisiti particolari.*
- **Indicazioni sullo stoccaggio misto:** *Non necessario.*
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** *Nessuno.*
- **7.3 Usi finali specifici** *Non sono disponibili altre informazioni.*

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** *Nessun dato ulteriore, vedere punto 7.*
- **8.1 Parametri di controllo**
- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:** *Non Necessario.*
- **Ulteriori indicazioni:** *Le liste valide alla data di compilazione sono state usate come base.*
- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**
Tenere lontano da cibo, bevande e foraggi.
Togliere immediatamente gli abiti contaminati.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
Custodire separatamente l'equipaggiamento protettivo.
- **Maschera protettiva:**
Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.
- **Guanti protettivi:**



Guanti protettivi

- Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.*
A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.
Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.
- **Materiale dei guanti**
La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro.
 - **Tempo di permeazione del materiale dei guanti**
Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

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· **Occhiali protettivi:**

Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

· **Indicazioni generali**

· **Aspetto:**

Forma: Solido

Colore: Non definito.

· **Odore:** Caratteristico

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non applicabile.

· **Cambiamento di stato**

Temperatura di fusione/ambito di fusione: 172-174 °C

Temperatura di ebollizione/ambito di ebollizione: Non definito.

· **Punto di infiammabilità:** Non applicabile.

· **Infiammabilità (solido, gassoso):** Sostanza non infiammabile.

· **Temperatura di accensione:**

Temperatura di decomposizione: Non definito.

· **Autoaccensione:** Non definito.

· **Pericolo di esplosione:** Prodotto non esplosivo.

· **Limiti di infiammabilità:**

Inferiore: Non definito.

Superiore: Non definito.

· **Tensione di vapore:** Non applicabile.

· **Densità:** Non definito.

· **Densità relativa** Non definito.

· **Densità del vapore** Non applicabile.

· **Velocità di evaporazione** Non applicabile.

· **Solubilità in/Miscibilità con acqua:**

Non definito.

· **Coefficiente di distribuzione (n-Octanol/acqua):** Non definito.

· **Viscosità:**

Dinamica: Non applicabile.

Cinematica: Non applicabile.

· **9.2 Altre informazioni** Non sono disponibili altre informazioni.

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SEZIONE 10: Stabilità e reattività

- **10.1 Reattività**
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** *Il prodotto non si decompone se utilizzato secondo le norme.*
- **10.3 Possibilità di reazioni pericolose** *Non sono note reazioni pericolose.*
- **10.4 Condizioni da evitare** *Non sono disponibili altre informazioni.*
- **10.5 Materiali incompatibili:** *Non sono disponibili altre informazioni.*
- **10.6 Prodotti di decomposizione pericolosi:** *Non sono noti prodotti di decomposizione pericolosi.*

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta:**
- **Irritabilità primaria:**
- **sulla pelle:** *Non ha effetti irritanti.*
- **sugli occhi:** *Non irritante.*
- **Sensibilizzazione:** *Non si conoscono effetti sensibilizzanti.*
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
Muta. 2, Carc. 1B

SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** *Non sono disponibili altre informazioni.*
- **12.2 Persistenza e degradabilità** *Non sono disponibili altre informazioni.*
- **12.3 Potenziale di bioaccumulo** *Non sono disponibili altre informazioni.*
- **12.4 Mobilità nel suolo** *Non sono disponibili altre informazioni.*
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:** *Non si conoscono dati di pericolosità per le acque.*
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** *Non applicabile.*
- **vPvB:** *Non applicabile.*
- **12.6 Altri effetti avversi** *Non sono disponibili altre informazioni.*

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** *Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.*
- **Imballaggi non puliti:**
- **Consigli:** *Smaltimento in conformità con le disposizioni amministrative.*

SEZIONE 14: Informazioni sul trasporto

- **14.5 Pericoli per l'ambiente:**
- **Marine pollutant:** *No*
- **14.6 Precauzioni speciali per gli utilizzatori** *Non applicabile.*

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- **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC** *Non applicabile.*

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Norme e legislazione su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Disposizioni nazionali:**
- **Indicazioni relative alla limitazione delle attività lavorative:**
Il personale non deve essere esposto a questa sostanza pericolosa L'autorità può ammettere nei singoli casi delle eccezioni.
- **15.2 Valutazione della sicurezza chimica:** *Una valutazione della sicurezza chimica non è stata effettuata.*

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Abbreviazioni e acronimi:**
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B

IT

製品安全データシート

JIS Z7253 による分類

印刷日: 2015.05.28

改訂日: 2015.05.28

1 化学物質等及び会社情報

- ・ 製品識別子
- ・ 商品名: biphenyl-3,3',4,4'-tetrayltetraamine
- ・ 製品番号: 13060
- ・ CAS 番号:
91-95-2
- ・ EC 番号:
202-110-6
- ・ EU 番号:
612-239-00-3
- ・ 該当純物質または混合物の関連特定用途及び使用禁止用途 追加的な関連情報は得られていません。
- ・ 成分の利用/調合 実験用化学物質
- ・ 安全データシートの供給元の詳細情報
- ・ 製造者/納入者:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ・ その他の情報問い合わせ先: Product safety department
- ・ 緊急通報用電話番号:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危険有害性の要約

- ・ 純物質または混合物の分類



健康に危険

生殖細胞変異原性 区分2 H341 遺伝性疾患のおそれの疑い

発がん性 区分1B H350 発がんのおそれ

- ・ ラベル要素

- ・ GHS ラベル要素

本化学物質はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

- ・ 危険図表



GHS08

- ・ 表示語 危険

- ・ 危険文句

遺伝性疾患のおそれの疑い

発がんのおそれ

- ・ 注意文句

保護手袋/保護衣/保護眼鏡/顔保護面の着用。

使用前に取扱説明書を入手すること。

全ての安全注意を読み理解するまで取り扱わないこと。

(2ページに続く)

製品安全データシート

JIS Z7253 による分類

印刷日: 2015.05.28

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商品名: biphenyl-3,3',4,4'-tetrayltetraamine

(1ページの続き)

ばく露又はばく露の懸念がある場合: 医師の診断 / 手当てを受けること。

施錠して保管すること。

現地/地域/国/国際規定に従い内容物・容器の露出

・その他の危険性

・PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント

・PBT (残留性、生物濃縮性、毒性物質): 情報なし

・vPvB (高残留性、高生物濃縮性物質): 情報なし

3 組成・成分情報

・化学的特性: 化学物質

・CAS 番号表示

91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine

・ID 番号

・EC 番号: 202-110-6

・EU 番号: 612-239-00-3

4 応急措置

・応急手当処置に関する説明

・吸い込んだ場合: 外気を送る、つらい場合には医師を呼ぶ

・皮膚が触れた場合: 一般的にはこの製品は皮膚には刺激はない

・眼に入った場合: 眼を開けたまま、流水で何分間か眼をすすぐ

・飲み込んだ場合: 状態が好転しない場合には医師に相談する

・最も重要な急性及び慢性の症状及び影響 追加的な関連情報は得られていません。

・何らかの即時医療処置及び特別治療の必要性を示す兆候 追加的な関連情報は得られていません。

5 火災時の措置

・消火剤

・適切な消火剤:

CO₂, 消火粉末剤あるいは水放射。火が大きい場合には水放射もしくは耐アルコール性泡を使用

・本化学物質または混合物から発生する特別な危険性 追加的な関連情報は得られていません。

・消防士向けアドバイス

・特別な保護装備: 特別な措置は必要としない

6 漏出時の措置

・個人的予防措置、保護具及び応急処置法 必要ない

・環境関連予防措置: 特別な措置は不必要

・封じ込め及び浄化のための方法及び材料: 13 項に下がい汚染材は廃棄物として処理する

・他のセクションへの言及

安全な取り扱い方に関しては 7 項を参照

人の保護装備の情報に関しては 8 項を参照

廃棄処分に関しては 13 項参照

7 取扱い・保管上の注意

・安全操作のための予防措置 容器は十分に注意しながら開封し、取り扱う

(3ページに続く)

製品安全データシート

JIS Z7253 による分類

印刷日: 2015.05.28

改訂日: 2015.05.28

商品名: biphenyl-3,3',4,4'-tetrayltetraamine

(2ページの続き)

- ・火災および爆発防止に関する注意事項: 呼吸保護装置を用意しておく
- ・混融危険性を含めた安全貯蔵条件
- ・保管:
 - ・保管スペースおよび容器に関する要求事項: 特別な要求事項なし
 - ・同じ場所に保管する際の注意事項: 必要ない
 - ・保管条件に関するその他の注意事項: ない
- ・特定の最終用途 追加的な関連情報は得られていません。

8 暴露防止及び保護措置

- ・技術設備の形体に関する追加注意事項: その他の申し立てなし、7項参照
- ・管理パラメーター
- ・作業場において限界値の監視を要する成分: 削除
- ・追加注意事項: 生成時に有効なリストがもとなっている
- ・暴露管理
- ・人的保護装備:
 - ・一般防止措置および衛生措置:
 - 食物、飲み物、飼料からは遠ざける
 - 汚れのしみ込んだ衣類は即刻脱ぐ
 - 休憩の前、作業終了後には手を洗う
 - 防護服は別に保管する
 - ・呼吸保護器具:
 - 短時間もしくは負担が小さい場合には呼吸フィルター付装置を、集中的にあるいは長時間触れる場合には、酸素ボンベ付き呼吸保護装置を使用すること
 - ・手の保護:



保護手袋

- 手袋の材質は物質/材料/調合剤に対して耐性であり、成分を通すことがあってはならないテストをおこなっていないため、物質/調合剤/化合物を取り扱う際の手袋の材質として勧められるものはない
- 浸透時間、透過性および劣化の点を留意しながら手袋の材質を選択する
- ・手袋材 適当な手袋は材質だけでなく、その他の品質によっても変わり、各メーカーによって異なる
 - ・手袋材の浸透時間 正確な浸透時間については保護手袋メーカーに問い合わせ、それを遵守すること
 - ・眼の保護:



密閉式保護めがね

9 物理的及び化学的性質

- ・基本的な物理及び化学特性に関する情報
- ・一般指示事項
- ・外観
 - 形: 個体
 - 色: 決まっていない。
- ・におい: 特徴的

(4ページに続く)

製品安全データシート

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商品名: biphenyl-3,3',4,4'-tetrayltetraamine

(3ページの続き)

・嗅覚閾値	決まっていない。
・pH-値:	情報なし
・状態の変化 融点/融解範囲:	172-174 °C
沸点/沸点範囲:	決まっていない
・引火点:	情報なし
・発火性(個体、気体):	成分は発火性ではない
・発火温度:	
分解温度:	決まっていない。
・自然発火性:	決まっていない。
・爆発の危険:	プロダクトは爆発する危険はない
・爆発限界: 下限:	決まっていない。
上限:	決まっていない。
・蒸気圧:	情報なし
・密度:	決まっていない
・相対的密度	決まっていない。
・蒸気密度	情報なし
・気化速度	情報なし
・以下成分における消和性/との混和性 水:	決まっていない。
・分配係数(n-オクタノール/水):	決まっていない。
・粘性: 力学的:	情報なし
運動性:	情報なし
・他の情報	追加的な関連情報は得られていません。

10 安定性及び反応性

- ・反応性
- ・化学的安定性
- ・熱分解/回避すべき条件: 規定どおりの使用では分解しない
- ・危険反応の可能性 危険な反応は起きていない
- ・避けるべき条件 追加的な関連情報は得られていません。
- ・不適合物質: 追加的な関連情報は得られていません。
- ・危険な分解生成物: 危険な分解プロダクトはない

11 有害性情報

- ・毒性学的影響に関する情報
- ・急性毒性:
- ・初期刺激作用:
- ・皮膚において: 刺激作用はない
- ・眼において: 刺激はない

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製品安全データシート

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商品名: biphenyl-3,3',4,4'-tetrayltetraamine

(4ページの続き)

- ・感作用: 感作用はない
- ・次の種類の潜在的な効果に対する情報
- ・CMR-作用 (癌誘発、因子変異、そして進化危険作用)
生殖細胞変異原性 区分2, 発がん性 区分1B

12 環境影響情報

- ・毒性
- ・水生生物に対する毒性: 追加的な関連情報は得られていません。
- ・持続性及び分解性 追加的な関連情報は得られていません。
- ・生体内蓄積能 追加的な関連情報は得られていません。
- ・土壌内移動性 追加的な関連情報は得られていません。
- ・その他のエコロジーに関する注意事項:
- ・一般注意事項: 水の危険要因ではない
- ・PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント
- ・PBT (残留性、生物濃縮性、毒性物質): 情報なし
- ・vPvB (高残留性、高生物濃縮性物質): 情報なし
- ・他の副作用 追加的な関連情報は得られていません。

13 廃棄上の注意

- ・廃棄物処理方法
- ・勧告: 家庭ごみとはいっしょに処分できない。下水処理施設に流してはならない
- ・洗浄されていないパッケージ:
- ・勧告: 関係当局の規則に従って処分する

14 輸送上の注意

- | | |
|---|------|
| ・環境危険: | |
| ・海の汚染物質: | いいえ |
| ・ユーザー用特別予防措置 | 情報なし |
| ・マルポール条約 (MARPOL73/78) 付属書II及びIBCコードに準じたバルク輸送 | 情報なし |

15 適用法令

- ・該当純物質または混合物に対する安全、衛生及び環境規制・法律
- ・化審法

既存化学物質

91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine	4-1475
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- ・特定化学物質 物質は含まれていない
- ・監視化学物質、旧第二種監視化学物質、旧第三種監視化学物質 物質は含まれていない
- ・優先評価化学物質 物質は含まれていない
- ・白物質 物質は含まれている
- ・既存化学物質安全性点検結果 (分解性・蓄積性) 物質は含まれていない
- ・既存化学物質安全性点検結果 (毒性) 物質は含まれていない

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製品安全データシート

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印刷日: 2015.05.28

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商品名: biphenyl-3,3',4,4'-tetrayltetraamine

(5ページの続き)

・GHS ラベル要素

本化学物質はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

・危険図表



GHS08

・表示語 危険

・危険文句

遺伝性疾患のおそれの疑い

発がんのおそれ

・注意文句

保護手袋/保護衣/保護眼鏡/顔保護面の着用。

使用前に取扱説明書を入手すること。

全ての安全注意を読み理解するまで取り扱わないこと。

ばく露又はばく露の懸念がある場合：医師の診断 / 手当を受けること。

施錠して保管すること。

現地/地域/国/国際規定に従い内容物・容器の露出

・国内規定:

・使用上の制約に関する注意事項:

被用者はこの危険成分に暴露されてはならない。ただし、場合に応じて関係当局が例外許可をおろすこともある

・化学物質の安全性評価: 化学物質安全性評価が遂行されていない

16 その他の情報

この情報は現在の我々の認識に基づいている。ただし、プロダクトの特性を保証するものではなく、また契約において法的根拠にはならない

・縮約と二文字語:

EINECS: European Inventory of Existing Commercial Chemical Substances

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

生殖細胞変異原性 区分2: Germ cell mutagenicity, Hazard Category 2

発がん性 区分1B: Carcinogenicity, Hazard Category 1B

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2015.05.28

개정: 2015.05.28

1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명:** biphenyl-3,3',4,4'-tetrayltetraamine
- **상품번호:** 13060
- **CAS-번호**
91-95-2
- **EC 의번호:**
202-110-6
- **색인 번호:**
612-239-00-3
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실화 학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조자/수입자/유통업자 정보:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Samchang Commercial Co., Ltd.**
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
- **추가적인 정보 획득 가능:** Product safety department
- **비상연락 전화번호:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성.위험성

- **순물질 또는 혼합물의 분류**



건강에 위험

생식세포 변이원성 구분2 H341 유전적인 결함을 일으킬 것으로 의심됨
발암성 구분1B H350 암을 일으킬 수 있음

- **라벨표기 요소**
- **GHS 라벨 요소**
본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



GHS08

- **신호어 위험**
- **유해.위험 문구**
유전적인 결함을 일으킬 것으로 의심됨

(2 쪽에 계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2015.05.28

개정: 2015.05.28

제품명: biphenyl-3,3',4,4'-tetrayltetraamine

(1 쪽부터계속)

- 압을 일으킬 수 있음
- **예방조치 문구**
(보호장갑·보호의·보안경·안면보호구)를(을) 착용 하시오.
사용 전 취급 설명서를 확보 하시오.
모든 안전 예방조치 문구를 읽고 이해하기 전에는 취급 하지 마시오.
노출되거나 노출이 우려되면 의학적인 조치·조언을 구 하시오.
잠금장치가 있는 저장장소에 저장 하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **기타 유해성**
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.

3 구성성분의 명칭 및 함유량

- **화 학 적 특 성:** 화학물질
- **CAS-번호표시**
91-95-2 biphenyl-3,3',4,4'-tetrayltetraamine
- **식별 번호**
- **EC 의번호:** 202-110-6
- **색인 번호:** 612-239-00-3

4 응급조치 요령

- **응급조치요령 내용**
- **흡입했을 때:** 신선한 공기를 쉼, 통증이 있을 때는 의료진의 도움을 구한다.
- **피부에 접촉했을 때:** 일반적으로 이 제품은 피부에 자극적이지 않다.
- **눈에 들어갔을 때:** 흐르는 물에 눈을 몇분동안 씻어낸다.
- **먹었을 때:** 증상이 지속될 경우에는 의사와 상담 한다.
- **가장 중요한 급·만성 증상 및 영향** 추가적인 정보가 존재하지 않습니다.
- **즉각적인 의료처치 및 특별치료가 필요함**을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:**
이산화탄소, 진화용 석회 가루 또는 물 방사를 사용하고, 더 큰 화재는 물을 분사 하거나 알코올 이 함유된 거품으로 끈다.
- **본 화학물질이나 혼합물에서 발생하는 특별 유해성** 추가적인 정보가 존재하지 않습니다.
- **소방관에 대한 권고사항**
- **화재 진압 시 착용할 보호구 및 예방조치:** 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 필요없음.
- **환경 관련 예방조치:** 특별한 조치가 필요없음.
- **밀폐 및 정화 방법과 소재:** 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
- **타 섹션 참조**
안전관리에 대한 정보는 제7 장 을 참고 하시오.
개인보호장비에 대한 정보는 제8 장 을 참고 하시오.

(3 쪽에계속)

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제31조의 1907/2006/EC에 따라

기압점: 2015.05.28

개정: 2015.05.28

제품명: biphenyl-3,3',4,4'-tetrayltetraamine

쓰레기 처리에 대한 정보는 제13 장을 참고하십시오.

(2 쪽부터 계속)

7 취급 및 저장방법

- 안전 취급을 위한 예방조치 조심스럽게 용기를 개봉하거나 취급한다.
- 화재 및 폭발 사고 예방대책에 관한 정보: 호흡보호장비를 항상 비치한다.
- 혼합위험성 등 안전 저장 조건
- 보관:
- 안전한 저장 방법: 특별한 요구사항이 없음.
- 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음
- 보관 조건에 관한 추가적인 정보: 없음
- 구체적인 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- 첨단시설 디자인에 대한 추가정보: 더 이상 의 자료는 없음. 항목 7을 참고하십시오.
- 통제 변수
- 화학물질의 노출기준, 생물학적 노출기준 등: 생략
- 추가 정보: 제조할 당시에 유효한 목록을 기초로 사용했다.
- 노출 통제
- 개인 보호구
- 일반적보호조치및위생조치:
 - 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
 - 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
 - 휴식 전이나 작업이 끝날때마다 손을 씻는다.
 - 방호복은 따로 보관한다.
- 호흡기 보호:
 - 단 시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.
- 손 보호:



보호용 장갑

장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다.
 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.
 통과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

- 장갑의 재료
 - 적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업자에 따라서도 다르게 선정되어야 한다.
- 장갑 재료의 투과 시간
 - 정확한 관통 시간은 보호장갑 제조자에 의하여 인지되고, 준수되어야 한다.
- 눈 보호:



확조이는 보안경

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9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보	
· 일반정보	
· 외형	
· 물리적 상태:	고체
· 색:	알맞지않다.
· 냄새:	특색있는
· 후각역치	알맞지않다.
· pH:	해당사항 없음.
· 상태변화	
· 녹는점/어는점:	172-174 °C
· 초기 끓는점과 끓는점 범위:	맞지않는
· 인화점:	해당사항 없음.
· 인화성(고체, 기체):	이 제품은 가연성이 없다.
· 점화온도:	
· 분해 온도:	알맞지않다.
· 자기점화:	알맞지않다.
· 폭발위험:	이 제품은 폭발위험성이 없다
· 인화 또는 폭발 범위의 상한/하한	
· 아래로:	알맞지않다.
· 위로:	알맞지않다.
· 증기압:	해당사항 없음.
· 밀도:	맞지않는다.
· 비중:	알맞지않다.
· 증기밀도:	해당사항 없음.
· 증발 속도:	해당사항 없음.
· 용해도:	
· 물:	알맞지않다.
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	해당사항 없음.
· 동점성:	해당사항 없음.
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에 따라 사용 할 경우 해체는 없다
- 유해반응 가능성 위험한 반응으로는 알려지지 않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.

(5 쪽에계속)

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(4 쪽부터계속)

· **유해분해물질:** 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- **급성 독성:**
- **입차적 자극 효과:**
- **피부 부식성 또는 자극성:** 무자극
- **심한 눈 손상 또는 자극성:** 무자극.
- **감각화:** 민감한영향이없는것으로알려져있다.
- **다음 종류의 잠재적인 효과에 대한 정보**
- **CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)**
 생식세포 변이원성 구분2, 발암성 구분1B

12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**
- **일반 특징:** 수질오염이알려져있지않다.
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
- **권고:** 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장:**
- **권고:** 당국의지침에입각한쓰레기처리.

14 운송에 필요한 정보

- | | |
|--|----------|
| · 환경적 유해물질: | |
| · 해양오염물질: | 아니오 |
| · 이용자 특별 예방조치 | 해당사항 없음. |
| · MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송 | 해당사항 없음. |

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(5 쪽부터계속)

15 법적 규제현황

- 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률
- GHS 라벨 요소
본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- 위험 도표



GHS08

- 표지어 위험
- 위험 문구
유전적인 결함을 일으킬 것으로 의심됨
암을 일으킬 수 있음
- 주의 문구
(보호장갑·보호의·보안경·안면보호구)를(을) 착용 하시오.
사용 전 취급 설명서를 확보 하시오.
모든 안전 예방조치 문구를 읽고 이해하기 전에는 취급하지 마시오.
노출되거나 노출이 우려되면 의학적인 조치·조언을 구 하시오.
잠금장치가 있는 저장장소에 저장 하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- 국내규정:
- 사용제한에 대한 정보:
노동자들은 이러한 위험물질을 내버리지 말아야 한다. 개별적인 경우에 관청은 예외를 허가할 수 있다.
- 화학물질 안전성 평가: 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날의 이상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산특성에 관한 보증은 기술하지 않았으며 계약적인 법률관계에 기반을 두고 있지 않다

- 최초 작성일자: 2015.05.28
- 개정 횟수 및 최종 개정일자: 1 / 2015.05.28
- 약어와 두문자어:
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
생식세포 변이원성 구분2: Germ cell mutagenicity, Hazard Category 2
발암성 구분1B: Carcinogenicity, Hazard Category 1B

KR

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 28.05.2015

Revisión: 28.05.2015

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** bifenilo-3,3',4,4'-tetraailtetraamina

· **Número del artículo:** 13060

· **Número CAS:**

91-95-2

· **Número CE:**

202-110-6

· **Número de clasificación:**

612-239-00-3

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· **1.3 Datos del proveedor de la ficha de datos de seguridad**

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· **1.4 Teléfono de emergencia:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· **2.1 Clasificación de la sustancia o de la mezcla**

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS08 peligro para la salud

Muta. 2 H341 Se sospecha que provoca defectos genéticos.

Carc. 1B H350 Puede provocar cáncer.

· **2.2 Elementos de la etiqueta**

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

La sustancia se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· **Pictogramas de peligro**



GHS08

(se continua en página 2)

ES

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 28.05.2015

Revisión: 28.05.2015

Nombre comercial: *bifenilo-3,3',4,4'-tetraaitetraamina*

(se continua en página 1)

- **Palabra de advertencia** Peligro
- **Indicaciones de peligro**
 - H341 *Se sospecha que provoca defectos genéticos.*
 - H350 *Puede provocar cáncer.*
- **Consejos de prudencia**
 - P281 *Utilizar el equipo de protección individual obligatorio.*
 - P201 *Pedir instrucciones especiales antes del uso.*
 - P202 *No manipular la sustancia antes de haber leído y comprendido todas las instrucciones de seguridad.*
 - P308+P313 *EN CASO DE exposición manifiesta o presunta: Consultar a un médico.*
 - P405 *Guardar bajo llave.*
 - P501 *Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.*
- **2.3 Otros peligros**
- **Resultados de la valoración PBT y mPmB**
- **PBT:** *No aplicable.*
- **mPmB:** *No aplicable.*

SECCIÓN 3: Composición/información sobre los componentes

- **3.1 Caracterización química: Sustancias**
- **Denominación N° CAS**
 - 91-95-2 *bifenilo-3,3',4,4'-tetraaitetraamina*
- **Número(s) de identificación**
- **Número CE:** 202-110-6
- **Número de clasificación:** 612-239-00-3

SECCIÓN 4: Primeros auxilios

- **4.1 Descripción de los primeros auxilios**
- **En caso de inhalación del producto:** *Suministrar aire fresco. En caso de trastornos, consultar al médico.*
- **En caso de contacto con la piel:** *Por regla general, el producto no irrita la piel.*
- **En caso de con los ojos:** *Limpia los ojos abiertos durante varios minutos con agua corriente.*
- **En caso de ingestión:** *Consultar un médico si los trastornos persisten.*
- **4.2 Principales síntomas y efectos, agudos y retardados** *No existen más datos relevantes disponibles.*
- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente** *No existen más datos relevantes disponibles.*

SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:**
 - CO₂, polvo extintor o chorro de agua rociada. *Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.*
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** *No existen más datos relevantes disponibles.*
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** *No se requieren medidas especiales.*

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** *No es necesario.*
- **6.2 Precauciones relativas al medio ambiente:** *No se requieren medidas especiales.*

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 28.05.2015

Revisión: 28.05.2015

Nombre comercial: bifenilo-3,3',4,4'-tetrailtetraamina

(se continua en página 2)

- **6.3 Métodos y material de contención y de limpieza:**
Desechar el material contaminado como vertido según item 13.
- **6.4 Referencia a otras secciones**
Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura** Abrir y manejar el recipiente con cuidado.
- **Prevención de incendios y explosiones:** Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:** Ningunos, -as.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.
- **8.1 Parámetros de control**
- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:** Nulo.
- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.
- **8.2 Controles de la exposición**
- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**
Mantener alejado de alimentos, bebidas y alimentos para animales.
Quitarse de inmediato la ropa ensuciada o impregnada.
Lavarse las manos antes de las pausas y al final del trabajo.
Guardar la ropa protectora por separado.
- **Protección respiratoria:**
Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.
- **Protección de manos:**



Guantes de protección

- El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.
Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.
Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.
- **Material de los guantes**
La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro.
- **Tiempo de penetración del material de los guantes**
El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

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· Protección de ojos:



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:	Sólido
Color:	No determinado.
Olor:	Característico
Umbral olfativo:	No determinado.

· valor pH: No aplicable.

· Cambio de estado

Punto de fusión /campo de fusión:	172-174 °C
Punto de ebullición /campo de ebullición:	Indeterminado.

· Punto de inflamación: No aplicable.

· Inflamabilidad (sólido, gaseiforme): La sustancia no es inflamable.

· Temperatura de ignición:

Temperatura de descomposición: No determinado.

· Autoinflamabilidad: No determinado.

· Peligro de explosión: El producto no es explosivo.

· Límites de explosión:

Inferior:	No determinado.
Superior:	No determinado.

· Presión de vapor: No aplicable.

· Densidad: Indeterminado.

· Densidad relativa: No determinado.

· Densidad de vapor: No aplicable.

· Velocidad de evaporación: No aplicable.

· Solubilidad en / miscibilidad con agua: No determinado.

· Coeficiente de reparto (n-octanol/agua): No determinado.

· Viscosidad:

Dinámica: No aplicable.

Cinemática: No aplicable.

· 9.2 Información adicional: No existen más datos relevantes disponibles.

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SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad**
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda:**
- **Efecto estimulante primario:**
- **en la piel:** No produce irritaciones.
- **en el ojo:** No produce irritaciones.
- **Sensibilización:** No se conoce ningún efecto sensibilizante.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
Muta. 2, Carc. 1B

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:** No se tiene conocimiento de que represente un peligro para el agua.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

- **14.5 Peligros para el medio ambiente:**
- **Contaminante marino:** No
- **14.6 Precauciones particulares para los usuarios** No aplicable.

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- **14.7 Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC** No aplicable.

SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**
Los empleados no deben exponerse a esta sustancia peligrosa. En casos aislados las autoridades pueden hacer excepciones.
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Abreviaturas y acrónimos:**
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B