

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

## 1 Identification

- **Product identifier**
- **Trade name:** THIOSEMICARBAZIDE
- **Article number:** 22000
- **CAS Number:**  
79-19-6
- **EC number:**  
201-184-7
- **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**



GHS06 Skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
thiosemicarbazide
- **Hazard statements**  
Fatal if swallowed.
- **Precautionary statements**  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
If swallowed: Immediately call a poison center/doctor.  
Specific treatment (see on this label).  
Rinse mouth.  
Store locked up.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 1)

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 3

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**

79-19-6 thiosemicarbazide

- **Identification number(s)**

- **EC number:** 201-184-7

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO<sub>2</sub>, 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.

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 2)

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about protection against explosions and fires:** No special measures required.
- **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.
- **Breathing equipment:** Not required.
- **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.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 3)

- **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:** Not required.

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

<b>Form:</b>	Crystalline
<b>Color:</b>	Beige
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

#### · Change in condition

<b>Melting point/Melting range:</b>	181-184 °C (358-363 °F)
<b>Boiling point/Boiling range:</b>	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:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

#### · Solubility in / Miscibility with

**Water:** Insoluble.

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

#### · Viscosity:

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

**Organic solvents:** 0.0 %

**Solids content:** 99.0 %

· **Other information** No further relevant information available.

US

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 4)

## 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**

· <b>IARC (International Agency for Research on Cancer)</b>
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Substance is not listed.
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· <b>NTP (National Toxicology Program)</b>
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Substance is not listed.
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· <b>OSHA-Ca (Occupational Safety Health Administration)</b>
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Substance is not listed.
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## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 3 (Assessment by list): extremely hazardous for water
- Do not allow product to reach ground water, water course or sewage system, even in small quantities.
- Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

US

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015



Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 5)

## 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

- |   |                                    |
|---|------------------------------------|
| <b>· UN-Number</b>  | UN2811                             |
| <b>· DOT, ADR, IMDG, IATA</b>   |                                    |
| <b>· UN proper shipping name</b>  | Toxic solids, organic, n.o.s.      |
| <b>· DOT</b>  | 2811 Toxic solids, organic, n.o.s. |
| <b>· ADR</b>  | TOXIC SOLID, ORGANIC, N.O.S.       |
| <b>· IMDG, IATA</b>   |                                    |
| <b>· Transport hazard class(es)</b>   |                                    |
| <b>· DOT</b>  |                                    |
|   |                                    |
| <b>· Class</b>  | 6.1 Toxic substances               |
| <b>· Label</b>  | 6.1                                |
|   |                                    |
| <b>· ADR, IMDG, IATA</b>  |                                    |
|  |                                    |
| <b>· Class</b>  | 6.1 Toxic substances               |
| <b>· Label</b>  | 6.1                                |
| <b>· Packing group</b>  | II                                 |
| <b>· DOT, ADR, IMDG, IATA</b>   |                                    |
| <b>· Environmental hazards:</b>   |                                    |
| <b>· Marine pollutant:</b>  | No                                 |
| <b>· Special precautions for user</b>   | Warning: Toxic substances          |
| <b>· Danger code (Kemler):</b>  | 60                                 |
| <b>· EMS Number:</b>  | F-A,S-A                            |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.                    |
| <b>· Transport/Additional information:</b>  |                                    |
| <b>· DOT</b>  |                                    |
| <b>· Hazardous substance:</b>   | 100 lbs, 45.4 kg                   |

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 6)

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul> | <p>Code: E4</p> <p>Maximum net quantity per inner packaging: 1 g</p> <p>Maximum net quantity per outer packaging: 500 g</p> |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>                         | <p>UN2811, Toxic solids, organic, n.o.s., 6.1, II</p>   |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

Substance is listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is 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.

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

- **Hazard pictograms**



GHS06

- **Signal word** Danger

- **Hazard-determining components of labeling:**

thiosemicarbazide

- **Hazard statements**

Fatal if swallowed.

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 7)

· **Precautionary statements**

*Wash thoroughly after handling.*

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

*If swallowed: Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Rinse mouth.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **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** 11/12/2015 / -

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*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)*

*Acute Tox. 2: Acute toxicity, Hazard Category 2*



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

Printing date 12.11.2015

Revision: 12.11.2015

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

- **Product identifier**

- **Trade name:** THIOSEMICARBAZIDE

- **Article number:** 22000

- **CAS Number:**

79-19-6

- **EC number:**

201-184-7

- **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**



GHS06 skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

- **Label elements**

- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 2)

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

Printing date 12.11.2015

Revision: 12.11.2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 1)

· **Hazard pictograms**

GHS06

· **Signal word** *Danger*· **Hazard-determining components of labelling:***thiosemicarbazide*· **Hazard statements***Fatal if swallowed.*· **Precautionary statements***Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**Specific treatment (see on this label).**Rinse mouth.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** *Not applicable.*· **vPvB:** *Not applicable.*

### 3 Composition/information on ingredients

· **Chemical characterisation: Substances**· **CAS No. Description***79-19-6 thiosemicarbazide*· **Identification number(s)**· **EC number:** *201-184-7*

### 4 First aid measures

· **Description of first aid measures**· **General information:***Immediately remove any clothing soiled by the product.**In case of irregular breathing or respiratory arrest provide artificial respiration.*· **After inhalation:** *In case of unconsciousness place patient stably in side position for transportation.*· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*· **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*· **After swallowing:** *Do not induce vomiting; call for medical help immediately.*· **Information for doctor:**· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*· **Indication of any immediate medical attention and special treatment needed***No further relevant information available.*

AU

(Contd. on page 3)

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

Printing date 12.11.2015

Revision: 12.11.2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 2)

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about fire - and explosion protection:** No special measures required.
- **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.
- **Respiratory protection:** Not required.

(Contd. on page 4)

AU

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

Printing date 12.11.2015

Revision: 12.11.2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 3)

**· 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:** Not required.

## 9 Physical and chemical properties

**· Information on basic physical and chemical properties****· General Information****· Appearance:**

<b>Form:</b>	Crystalline
<b>Colour:</b>	Beige
<b>· Odour:</b>	Characteristic
<b>· Odour threshold:</b>	Not determined.

**· pH-value:** Not applicable.

**· Change in condition**

<b>Melting point/Melting range:</b>	181-184 °C
<b>Boiling point/Boiling range:</b>	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:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**· Vapour pressure:** Not applicable.

**· Density:** Not determined.

**· Relative density** Not determined.

**· Vapour density** Not applicable.

**· Evaporation rate** Not applicable.

(Contd. on page 5)

AU

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

Printing date 12.11.2015

Revision: 12.11.2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 4)

- |   |   |
|---|---|
| · <b>Solubility in / Miscibility with water:</b>  | <i>Insoluble.</i>                                 |
| · <b>Partition coefficient (n-octanol/water):</b> | <i>Not determined.</i>                            |
| · <b>Viscosity:</b>                               |   |
| <b>Dynamic:</b>                                   | <i>Not applicable.</i>                            |
| <b>Kinematic:</b>                                 | <i>Not applicable.</i>                            |
| · <b>Solvent content:</b>                         |   |
| <b>Organic solvents:</b>                          | <i>0.0 %</i>                                      |
| <b>VOC (EC)</b>                                   | <i>0.00 %</i>                                     |
| · <b>Solids content:</b>                          | <i>99.0 %</i>                                     |
| · <b>Other information</b>                        | <i>No further relevant information available.</i> |

**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:**
- **Skin corrosion/irritation** *No irritant effect.*
- **Serious eye damage/irritation** *No irritating effect.*
- **Respiratory or skin sensitisation** *No sensitising effects known.*

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

(Contd. on page 6)

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

Printing date 12.11.2015

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Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 5)

· **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.

**14 Transport information**

- |  |  |
|--|--|
| · <b>UN-Number</b>   |  |
| · <b>ADG, IMDG, IATA</b>   | UN2811   |
| · <b>UN proper shipping name</b>   |  |
| · <b>ADG</b>   | 2811 TOXIC SOLID, ORGANIC, N.O.S.  |
| · <b>IMDG, IATA</b>  | TOXIC SOLID, ORGANIC, N.O.S.   |
| · <b>Transport hazard class(es)</b>  |  |
| · <b>ADG, IMDG, IATA</b>   |  |
|  |  |
| · <b>Class</b>   | 6.1 Toxic substances.  |
| · <b>Label</b>   | 6.1  |
| · <b>Packing group</b>   |  |
| · <b>ADG, IMDG, IATA</b>   | II   |
| · <b>Environmental hazards:</b>  |  |
| · <b>Marine pollutant:</b>   | No   |
| · <b>Special precautions for user</b>  | Warning: Toxic substances.   |
| · <b>Danger code (Kemler):</b>   | 60   |
| · <b>EMS Number:</b>   | F-A,S-A  |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>   | Not applicable.  |
| · <b>Transport/Additional information:</b>   |  |
| · <b>ADG</b>   |  |
| · <b>Limited quantities (LQ)</b>   | 500 g  |
| · <b>Excepted quantities (EQ)</b>  | Code: E4<br>Maximum net quantity per inner packaging: 1 g<br>Maximum net quantity per outer packaging: 500 g |
| · <b>Transport category</b>  | 2  |
| · <b>Tunnel restriction code</b>   | D/E  |
| · <b>UN "Model Regulation":</b>  | UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, II  |

AU

(Contd. on page 7)

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

Printing date 12.11.2015

Revision: 12.11.2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 6)

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Australian Inventory of Chemical Substances**

Substance is listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

Substance is not listed.

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS06

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

*thiosemicarbazide*

· **Hazard statements**

*Fatal if swallowed.*

· **Precautionary statements**

*Wash thoroughly after handling.*

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

*IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*

*Specific treatment (see on this label).*

*Rinse mouth.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

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

### 16 Other information

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

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

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

*VOC: Volatile Organic Compounds (USA, EU)*

*Acute Tox. 2: Acute toxicity, Hazard Category 2*

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

## 1 Identification

- **Product identifier**
- **Trade name:** THIOSEMICARBAZIDE
- **Article number:** 22000
- **CAS Number:**  
79-19-6
- **EC number:**  
201-184-7
- **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**



GHS06 Skull and crossbones

Acute Tox. 2      H300 Fatal if swallowed.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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

Not applicable.



Very toxic

Very toxic if swallowed.

- **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.

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



Very toxic

- **Risk phrases:**

Very toxic if swallowed.

(Contd. on page 2)

CA



# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 1)

- **Safety phrases:**

After contact with skin, wash immediately with plenty of water

Wear suitable protective clothing and gloves.

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

This material and its container must be disposed of as hazardous waste.

- **Hazard description:**

- **WHMIS-symbols:**

D1A - Very toxic material causing immediate and serious toxic effects



- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 3

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**

79-19-6 thiosemicarbazide

- **Identification number(s)**

- **EC number:** 201-184-7

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about protection against explosions and fires:** No special measures required.
- **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.
- **Breathing equipment:** Not required.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 3)

· **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:** Not required.

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

<b>Form:</b>	Crystalline
<b>Color:</b>	Beige
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

<b>Melting point/Melting range:</b>	181-184 °C
<b>Boiling point/Boiling range:</b>	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:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

(Contd. on page 5)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 4)

- |   |   |
|---|---|
| <b>· Solubility in / Miscibility with Water:</b>  | <i>Insoluble.</i>                                 |
| <b>· Partition coefficient (n-octanol/water):</b> | <i>Not determined.</i>                            |
| <b>· Viscosity:</b>                               |   |
| <b>Dynamic:</b>                                   | <i>Not applicable.</i>                            |
| <b>Kinematic:</b>                                 | <i>Not applicable.</i>                            |
| <b>Organic solvents:</b>                          | <i>0.0 %</i>                                      |
| <b>· Solids content:</b>                          | <i>99.0 %</i>                                     |
| <b>· Other information</b>                        | <i>No further relevant information available.</i> |

## 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**

<b>· IARC (International Agency for Research on Cancer)</b>
---

<i>Substance is not listed.</i>
---------------------------------

<b>· NTP (National Toxicology Program)</b>
--

<i>Substance is not listed.</i>
---------------------------------

<b>· OSHA-Ca (Occupational Safety Health Administration)</b>
--

<i>Substance is not listed.</i>
---------------------------------

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*

(Contd. on page 6)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**



(Contd. of page 5)

- **Additional ecological information:**
- **General notes:**  
*Water hazard class 3 (Assessment by list): extremely hazardous for water  
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
 Danger to drinking water if even extremely small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

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

## 14 Transport information

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, TDG, IMDG, IATA</b></li> </ul>   | <p style="margin-left: 20px;">UN2811</p>   |   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>TDG</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p style="margin-left: 20px;">Toxic solids, organic, n.o.s.<br/>           2811 Toxic solids, organic, n.o.s.<br/>           TOXIC SOLID, ORGANIC, N.O.S.</p>  |   |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>   | <div style="text-align: center; margin-bottom: 10px;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> <li>· <b>TDG, IMDG, IATA</b></li> </ul> | <p style="margin-left: 20px;">6.1 Toxic substances<br/>           6.1</p> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <div style="text-align: center; margin-bottom: 10px;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>                                   | <p style="margin-left: 20px;">6.1 Toxic substances<br/>           6.1</p> |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, TDG, IMDG, IATA</b></li> </ul>   | <p style="margin-left: 20px;">II</p>   |   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                       | <p style="margin-left: 20px;">No</p>   |   |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> </ul>                             | <p style="margin-left: 20px;">Warning: Toxic substances<br/>           60</p>  |   |

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 6)

- |  |  |
|--|--|
| <b>· EMS Number:</b>   | F-A,S-A  |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.  |
| <b>· Transport/Additional information:</b>                                       |  |
| <b>· DOT</b>   |  |
| <b>· Hazardous substance:</b>  | 100 lbs, 45.4 kg   |
| <hr style="border-top: 1px dashed black;"/>                                      |  |
| <b>· TDG</b>   |  |
| <b>· Excepted quantities (EQ)</b>  | Code: E4<br>Maximum net quantity per inner packaging: 1 g<br>Maximum net quantity per outer packaging: 500 g |
| <b>· UN "Model Regulation":</b>  | UN2811, Toxic solids, organic, n.o.s., 6.1, II   |

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

- **Section 355 (extremely hazardous substances):**

Substance is listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is 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 listed.

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2015

Reviewed on 11/12/2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 7)

· **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is not listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

Substance is listed.

· **Product related hazard informations:**

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

· **Hazard symbols:**



Very toxic

· **Risk phrases:**

Very toxic if swallowed.

· **Safety phrases:**

After contact with skin, wash immediately with plenty of water

Wear suitable protective clothing and gloves.

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

This material and its container must be disposed of as hazardous waste.

· **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** 11/12/2015 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

Acute Tox. 2: Acute toxicity, Hazard Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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

Printing date 12.11.2015

Revision: 12.11.2015

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

- **1.1 Product identifier**
- **Trade name:** THIOSEMICARBAZIDE
- **Article number:** 22000
- **CAS Number:**  
79-19-6
- **EC number:**  
201-184-7
- **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**



GHS06 skull and crossbones

Acute Tox. 2      H300 Fatal if swallowed.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **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**



GHS06

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
thiosemicarbazide
- **Hazard statements**  
H300 Fatal if swallowed.  
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**  
P273      Avoid release to the environment.

(Contd. on page 2)



# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.11.2015

Revision: 12.11.2015

**Trade name: THIOSEMICARBAZIDE**

(Contd. of page 1)

- P264 Wash thoroughly after handling.
- P301+P310 **IF SWALLOWED:** Immediately call a POISON CENTER/ doctor.
- P321 Specific treatment (see on this label).
- 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**

79-19-6 thiosemicarbazide

· **Identification number(s)**

· **EC number:** 201-184-7

### SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **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:**

CO<sub>2</sub>, 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:** Do not allow to enter sewers/ surface or ground water.

· **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.

(Contd. on page 3)

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

Printing date 12.11.2015

Revision: 12.11.2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 2)

See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Thorough dedusting.
- **Information about fire - and explosion protection:** No special measures required.
- **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.
- **Respiratory protection:** Not required.
- **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:** Not required.

GB

(Contd. on page 4)

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

Printing date 12.11.2015

Revision: 12.11.2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 3)

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

Form:	Crystalline
Colour:	Beige
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value: Not applicable.

##### · Change in condition

Melting point/Melting range:	181-184 °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:

Insoluble.

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

##### · Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

##### · Solvent content:

Organic solvents:	0.0 %
VOC (EC)	0.00 %

Solids content: 99.0 %

· 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.

(Contd. on page 5)

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

Printing date 12.11.2015

Revision: 12.11.2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 4)

- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **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:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

### 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:**  
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.
- **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

- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| · <b>14.1 UN-Number</b>               |                                   |
| · <b>ADR, IMDG, IATA</b>              | UN2811                            |
| · <b>14.2 UN proper shipping name</b> |                                   |
| · <b>ADR</b>                          | 2811 TOXIC SOLID, ORGANIC, N.O.S. |
| · <b>IMDG, IATA</b>                   | TOXIC SOLID, ORGANIC, N.O.S.      |

(Contd. on page 6)

GB

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.11.2015

Revision: 12.11.2015

Trade name: **THIOSEMICARBAZIDE**

(Contd. of page 5)

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class** 6.1 Toxic substances.  
 · **Label** 6.1

· **14.4 Packing group**

· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

· **Danger code (Kemler):** Warning: Toxic substances.  
60

· **EMS Number:** F-A,S-A

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)** 500 g  
 · **Excepted quantities (EQ)** Code: E4  
 Maximum net quantity per inner packaging: 1 g  
 Maximum net quantity per outer packaging: 500 g

· **Transport category** 2  
 · **Tunnel restriction code** D/E

· **UN "Model Regulation":** UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, II

## SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **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:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 2: Acute toxicity, Hazard Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

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

- **1.1 Productidentificatie**
- **Handelsnaam:** THIOSEMICARBAZIDE
- **Artikelnummer:** 22000
- **CAS-nummer:**  
79-19-6
- **EC-nummer:**  
201-184-7
- **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 verstrekker 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**



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 2      H300 Dodelijk bij inslikken.

Aquatic Chronic 3 H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.

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



GHS06

- **Signaalwoord** Gevaar

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

**Handelsnaam: THIOSEMICARBAZIDE**

(Vervolg van blz. 1)

- **Gevaaraanduidende componenten voor de etikettering:**  
thiosemicarbazide
- **Gevarenaanduidingen**  
H300 Dodelijk bij inslikken.  
H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.
- **Veiligheidsaanbevelingen**  
P273 Voorkom lozing in het milieu.  
P264 Na het werken met dit product grondig wassen.  
P301+P310 NA INSLIKKEN: onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.  
P321 Specifieke behandeling vereist (zie op dit etiket).  
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**  
79-19-6 thiosemicarbazide
- **Identificatienummer(s)**
- **EC-nummer:** 201-184-7

### RUBRIEK 4: Eerstehulpmaatregelen

- **4.1 Beschrijving van de eerstehulpmaatregelen**
- **Algemene informatie:**  
Verontreinigde kleding onmiddellijk uittrekken.  
Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.
- **Na het inademen:** Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.
- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
- **Na inslikken:** Geen braken teweegbrengen en onmiddellijk medische hulp 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:**  
CO<sub>2</sub>, 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.

(Vervolg op blz. 3)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

**Handelsnaam: THIOSEMICARBAZIDE**

(Vervolg van blz. 2)

- **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.
- **6.2 Milieuvorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terecht komen.
- **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** Goed stofvrij maken.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **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.
- **Ademhalingsbescherming:** Niet noodzakelijk.
- **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.

(Vervolg op blz. 4)



# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

**Handelsnaam: THIOSEMICARBAZIDE**

(Vervolg van blz. 3)

- **Doordringingstijd van het handschoenmateriaal**  
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:** Niet noodzakelijk.

### RUBRIEK 9: Fysische en chemische eigenschappen

#### · 9.1 Informatie over fysische en chemische basiseigenschappen

##### · Algemene gegevens

##### · Voorkomen:

<b>Vorm:</b>	Kristallijn
<b>Kleur:</b>	Beige
<b>Reuk:</b>	Karakteristiek
<b>Geurdrempelwaarde:</b>	Niet bepaald.

· **pH-waarde:** Niet bruikbaar.

##### · Toestandsverandering

<b>Smeltpunt/smeltbereik:</b>	181-184 °C
<b>Kookpunt/kookpuntbereik:</b>	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:

<b>Onderste:</b>	Niet bepaald.
<b>Bovenste:</b>	Niet bepaald.

· **Dampspanning:** Niet bruikbaar.

<b>Dichtheid:</b>	Niet bepaald.
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bruikbaar.
· <b>Verdampingssnelheid</b>	Niet bruikbaar.

##### · Oplosbaarheid in/mengbaarheid met

**Water:** Niet oplosbaar.

· **Verdelingscoëfficiënt (n-octanol/water):** Niet bepaald.

##### · Viscositeit

<b>Dynamisch:</b>	Niet bruikbaar.
<b>Kinematisch:</b>	Niet bruikbaar.

##### · Oplosmiddelgehalte:

<b>Organisch oplosmiddel:</b>	0,0 %
<b>VOC (EG)</b>	0,00 %

**Gehalte aan vaste bestanddelen:** 99,0 %

· **9.2 Overige informatie** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 5)

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

Handelsnaam: THIOSEMICARBAZIDE

(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:**
- **Huidcorrosie/-irritatie** Geen prikkelend effect.
- **Ernstig oogletsel/oogirritatie** Geen prikkelend effect.
- **Sensibilisatie van de luchtwegen/de huid** Geen effect van overgevoeligheid bekend.

## 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) 10: Kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.  
Gevaar voor water klasse 3 (D) (Lijstclassificatie): gevaar voor water groot  
Niet lozen in grondwater, oppervlaktewater of riolering, ook niet in kleine hoeveelheden.  
Gevaar voor drinkwater zelfs bij het uitlopen van zeer geringe hoeveelheden in de ondergrond.
- **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 terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

## RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, IMDG, IATA**

UN2811

(Vervolg op blz. 6)

NL

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

**Handelsnaam: THIOSEMICARBAZIDE**

(Vervolg van blz. 5)

· **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**  
 · **ADR** 2811 GIFTIGE ORGANISCHE VASTE STOF, N.E.G.  
 · **IMDG, IATA** TOXIC SOLID, ORGANIC, N.O.S.

· **14.3 Transportgevarenklasse(n)**

· **ADR, IMDG, IATA**



· **klasse** 6.1 Giftige stoffen  
 · **Etiket** 6.1

· **14.4 Verpakkingsgroep:**

· **ADR, IMDG, IATA** II

· **14.5 Milieugevaren:**

· **Marine pollutant:** Neen

· **14.6 Bijzondere voorzorgen voor de gebruiker** Waarschuwing: Giftige stoffen

· **Kemler-getal:** 60

· **EMS-nummer:** F-A,S-A

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

· **Transport/verdere gegevens:**

· **ADR**  
 · **Beperkte hoeveelheden (LQ)** 500 g  
 · **Uitzonderde hoeveelheden (EQ)** Code: E4  
 Grootste netto hoeveelheid per binnenverpakking: 1 g  
 Grootste netto hoeveelheid per buitenverpakking: 500 g

· **Vervoerscategorie** 2  
 · **Tunnelbeperkingscode** D/E

· **VN "Model Regulation":** UN2811, GIFTIGE ORGANISCHE VASTE STOF, N.E.G., 6.1, II

## 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 niet 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.

(Vervolg op blz. 7)

**Veiligheidsinformatieblad**  
volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.11.2015

Herziening van: 12.11.2015

**Handelsnaam: THIOSEMICARBAZIDE**

(Vervolg van blz. 6)

- **Richtlijn 2012/18/EU**
- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** De stof is niet aanwezig.
- **Nationale voorschriften:**
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 10: 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:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
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)  
VOC: Volatile Organic Compounds (USA, EU)  
Acute Tox. 2: Acute toxicity, Hazard Category 2  
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

NL

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31


Date d'impression : 12.11.2015

Révision: 12.11.2015

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

- **1.1 Identificateur de produit**
- **Nom du produit:** THIOSEMICARBAZIDE
- **Code du produit:** 22000
- **No CAS:**  
79-19-6
- **Numéro CE:**  
201-184-7
- **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**
- 
GHS06 tête de mort sur deux tibias
- Acute Tox. 2      H300 Mortel en cas d'ingestion.

---

Aquatic Chronic 3 H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- **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**



GHS06

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**  
thiosemicarbazide
- **Mentions de danger**  
H300 Mortel en cas d'ingestion.  
H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- **Conseils de prudence**  
P273 Éviter le rejet dans l'environnement.  
P264 Se laver soigneusement après manipulation.

(suite page 2)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.11.2015

Révision: 12.11.2015

**Nom du produit: THIOSEMICARBAZIDE**

(suite de la page 1)

**P301+P310 EN CAS D'INGESTION:** Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

**P321** Traitement spécifique (voir sur cette étiquette).

**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**  
79-19-6 thiosemicarbazide
- **Code(s) d'identification**
- **Numéro CE:** 201-184-7

### SECTION 4: Premiers secours

- **4.1 Description des premiers secours**
- **Remarques générales:**  
Enlever immédiatement les vêtements contaminés par le produit.  
Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.
- **Après inhalation:** En cas d'inconscience, coucher et transporter la personne en position latérale stable.
- **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.
- **Après contact avec les yeux:**  
Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.
- **Après ingestion:** Ne pas faire vomir, demander d'urgence une assistance médicale.
- **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:**  
CO<sub>2</sub>, 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:**  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.

(suite page 3)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.11.2015

Révision: 12.11.2015

**Nom du produit: THIOSEMICARBAZIDE**

(suite de la page 2)

- **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.  
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** Bien dépoussiérer.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **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**
- **Equipement 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.
- **Protection respiratoire:** N'est pas nécessaire.
- **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.

(suite page 4)

**Fiche de données de sécurité**  
selon 1907/2006/CE, Article 31

Date d'impression : 12.11.2015

Révision: 12.11.2015

Nom du produit: **THIOSEMICARBAZIDE**

(suite de la page 3)

· **Protection des yeux:** Pas nécessaire.

### SECTION 9: Propriétés physiques et chimiques

#### · 9.1 Informations sur les propriétés physiques et chimiques essentielles

##### · Indications générales

##### · Aspect:

· <b>Forme:</b>	Cristalline
· <b>Couleur:</b>	Beige
· <b>Odeur:</b>	Caractéristique
· <b>Seuil olfactif:</b>	Non déterminé.

· **valeur du pH:** Non applicable.

##### · Changement d'état

· <b>Point de fusion:</b>	181-184 °C
· <b>Point d'ébullition:</b>	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:

· <b>Inférieure:</b>	Non déterminé.
· <b>Supérieure:</b>	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:** Insoluble

· **Coefficient de partage (n-octanol/eau):** Non déterminé.

##### · Viscosité:

· <b>Dynamique:</b>	Non applicable.
· <b>Cinématique:</b>	Non applicable.

##### · Teneur en solvants:

· <b>Solvants organiques:</b>	0,0 %
· <b>VOC (CE)</b>	0,00 %

· **Teneur en substances solides:** 99,0 %

· **9.2 Autres informations** Pas d'autres informations importantes disponibles.

FR

(suite page 5)



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.11.2015

Révision: 12.11.2015

Nom du produit: **THIOSEMICARBAZIDE**

(suite de la page 4)

### 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:**
- **Corrosion cutanée/irritation cutanée** Pas d'effet d'irritation.
- **Lésions oculaires graves/irritation oculaire** Pas d'effet d'irritation.
- **Sensibilisation respiratoire ou cutanée** Aucun effet de sensibilisation connu.

### 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:**  
Catégorie de pollution des eaux 3 (D) (classification selon liste): très polluant  
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations, même pas en petite quantité.  
Danger pour l'eau potable dès fuite d'une quantité minime dans le sous-sol.
- **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

- **14.1 No ONU**
- **ADR, IMDG, IATA**

UN2811

(suite page 6)

# Fiche de données de sécurité


## selon 1907/2006/CE, Article 31

Date d'impression : 12.11.2015

Révision: 12.11.2015

**Nom du produit: THIOSEMICARBAZIDE**

(suite de la page 5)

<ul style="list-style-type: none"> <li>· <b>14.2 Nom d'expédition des Nations unies</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>2811 SOLIDE ORGANIQUE TOXIQUE, N.S.A. TOXIC SOLID, ORGANIC, N.O.S.</p>
<ul style="list-style-type: none"> <li>· <b>14.3 Classe(s) de danger pour le transport</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	
	
<ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Étiquette</b></li> </ul>	<p>6.1 Matières toxiques. 6.1</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Groupe d'emballage</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<p>II</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Dangers pour l'environnement:</b></li> <li>· <b>Marine Pollutant:</b></li> </ul>	<p>Non</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Précautions particulières à prendre par l'utilisateur</b></li> <li>· <b>Indice Kemler:</b></li> <li>· <b>No EMS:</b></li> </ul>	<p>Attention: Matières toxiques. 60 F-A,S-A</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol 73/78 et au recueil IBC</b></li> </ul>	<p>Non applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Indications complémentaires de transport:</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Quantités limitées (LQ)</b></li> <li>· <b>Quantités exceptées (EQ)</b></li> </ul>	<p>500 g Code: E4 Quantité maximale nette par emballage intérieur: 1 g Quantité maximale nette par emballage extérieur: 500 g</p>
<ul style="list-style-type: none"> <li>· <b>Catégorie de transport</b></li> <li>· <b>Code de restriction en tunnels</b></li> </ul>	<p>2 D/E</p>
<ul style="list-style-type: none"> <li>· <b>"Règlement type" de l'ONU:</b></li> </ul>	<p>UN2811, SOLIDE ORGANIQUE TOXIQUE, N.S.A., 6.1, II</p>

### SECTION 15: Informations réglementaires

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** la substance n'est pas comprise
- **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:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route

(suite page 7)

**Fiche de données de sécurité**  
**selon 1907/2006/CE, Article 31**

Date d'impression : 12.11.2015

Révision: 12.11.2015

**Nom du produit: THIOSEMICARBAZIDE**

(suite de la page 6)

*IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**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)**VOC: Volatile Organic Compounds (USA, EU)**Acute Tox. 2: Acute toxicity, Hazard Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3*

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# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

überarbeitet am: 12.11.2015

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

- **1.1 Produktidentifikator**
- **Handelsname:** THIOSEMICARBAZIDE
- **Artikelnummer:** 22000
- **CAS-Nummer:**  
79-19-6
- **EG-Nummer:**  
201-184-7
- **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**



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 2      H300 Lebensgefahr bei Verschlucken.

Aquatic Chronic 3 H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**  
Der Stoff ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

überarbeitet am: 12.11.2015

**Handelsname: THIOSEMICARBAZIDE**

(Fortsetzung von Seite 1)

**· Gefahrenpiktogramme**


GHS06

**· Signalwort Gefahr**
**· Gefahrbestimmende Komponenten zur Etikettierung:**

Thiosemicarbacid

**· Gefahrenhinweise**

H300 Lebensgefahr bei Verschlucken.

H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.

**· Sicherheitshinweise**

P273 Freisetzung in die Umwelt vermeiden.

P264 Nach Gebrauch gründlich waschen.

P301+P310 BEI VERSCHLUCKEN: Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

P321 Besondere Behandlung (siehe auf dieser Kennzeichnungsetikett).

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

**· 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**

79-19-6 Thiosemicarbacid

**· Identifikationsnummer(n)**
**· EG-Nummer:** 201-184-7

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

**· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
**· Allgemeine Hinweise:**

Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.

Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

**· Nach Einatmen:** Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

**· Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.

**· Nach Augenkontakt:**

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

**· Nach Verschlucken:** Kein Erbrechen herbeiführen, sofort ärztliche Hilfe zuziehen.

**· 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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(Fortsetzung auf Seite 3)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

überarbeitet am: 12.11.2015

Handelsname: THIOSEMICARBAZIDE

(Fortsetzung von Seite 2)

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:**  
CO<sub>2</sub>, 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:** Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **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** Gute Entstaubung.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **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.

(Fortsetzung auf Seite 4)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

überarbeitet am: 12.11.2015

**Handelsname: THIOSEMICARBAZIDE**

(Fortsetzung von Seite 3)

- **Atemschutz:** Nicht erforderlich.
- **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:** Nicht erforderlich.

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

- **Allgemeine Angaben**

- **Aussehen:**

**Form:** Kristallin

**Farbe:** Beige

- **Geruch:** Charakteristisch

- **Geruchsschwelle:** Nicht bestimmt.

- **pH-Wert:** Nicht anwendbar.

- **Zustandsänderung**

**Schmelzpunkt/Schmelzbereich:** 181-184 °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.

**Obere:** Nicht bestimmt.

- **Dampfdruck:** Nicht anwendbar.

- **Dichte:** Nicht bestimmt.

- **Relative Dichte:** Nicht bestimmt.

- **Dampfdichte:** Nicht anwendbar.

- **Verdampfungsgeschwindigkeit:** Nicht anwendbar.

(Fortsetzung auf Seite 5)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

überarbeitet am: 12.11.2015

**Handelsname: THIOSEMICARBAZIDE**

(Fortsetzung von Seite 4)

· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Unlöslich.
· <b>Verteilungskoeffizient (n-Octanol/Wasser):</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht anwendbar.
<b>Kinematisch:</b>	Nicht anwendbar.
· <b>Lösemittelgehalt:</b>	
<b>Organische Lösemittel:</b>	0,0 %
<b>VOC (EU)</b>	0,00 %
· <b>Festkörpergehalt:</b>	99,0 %
· <b>9.2 Sonstige Angaben</b>	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:**
- **Ätz-/Reizwirkung auf die Haut** Keine Reizwirkung.
- **Schwere Augenschädigung/-reizung** Keine Reizwirkung.
- **Sensibilisierung der Atemwege/Haut** Keine sensibilisierende Wirkung bekannt.

### 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:**  
Wassergefährdungsklasse 3 (Listeneinstufung): stark wassergefährdend  
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.  
Trinkwassergefährdung bereits beim Auslaufen geringster Mengen in den Untergrund.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

(Fortsetzung auf Seite 6)



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

überarbeitet am: 12.11.2015

Handelsname: THIOSEMICARBAZIDE


(Fortsetzung von Seite 5)

· 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

<ul style="list-style-type: none"> <li>· 14.1 UN-Nummer</li> <li>· ADR, IMDG, IATA</li> </ul>	UN2811
<ul style="list-style-type: none"> <li>· 14.2 Ordnungsgemäße UN-Versandbezeichnung</li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	2811 GIFTIGER ORGANISCHER FESTER STOFF, N.A.G. TOXIC SOLID, ORGANIC, N.O.S.
<ul style="list-style-type: none"> <li>· 14.3 Transportgefahrenklassen</li> <li>· ADR, IMDG, IATA</li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· Klasse</li> <li>· Gefahrzettel</li> </ul>	6.1 Giftige Stoffe 6.1
<ul style="list-style-type: none"> <li>· 14.4 Verpackungsgruppe</li> <li>· ADR, IMDG, IATA</li> </ul>	II
<ul style="list-style-type: none"> <li>· 14.5 Umweltgefahren:</li> <li>· Marine pollutant:</li> </ul>	Nein
<ul style="list-style-type: none"> <li>· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender</li> <li>· Kemler-Zahl:</li> <li>· EMS-Nummer:</li> </ul>	Achtung: Giftige Stoffe 60 F-A,S-A
<ul style="list-style-type: none"> <li>· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code</li> </ul>	Nicht anwendbar.
<ul style="list-style-type: none"> <li>· Transport/weitere Angaben:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Begrenzte Menge (LQ)</li> <li>· Freigestellte Mengen (EQ)</li> <li>· Beförderungskategorie</li> <li>· Tunnelbeschränkungscode</li> </ul>	500 g Code: E4 Höchste Nettomenge je Innenverpackung: 1 g Höchste Nettomenge je Außenverpackung: 500 g 2 D/E

(Fortsetzung auf Seite 7)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.11.2015

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**Handelsname: THIOSEMICARBAZIDE**

(Fortsetzung von Seite 6)

· **UN "Model Regulation":** UN2811, GIFTIGER ORGANISCHER FESTER STOFF, N.A.G., 6.1, II

### ABSCHNITT 15: Rechtsvorschriften

· **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**

· Richtlinie 2012/18/EU

· **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Der Stoff ist nicht enthalten.

· **Nationale Vorschriften:**

· **Technische Anleitung Luft:**

Klasse	Anteil in %
I	99,0

· **Wassergefährdungsklasse: WGK 3 (Listeneinstufung):** stark wassergefährdend.

· **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:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 2: Acute toxicity, Hazard Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.11.2015

Revisione: 12.11.2015

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** THIOSEMICARBAZIDE

· **Articolo numero:** 22000

· **Numero CAS:**

79-19-6

· **Numeri CE:**

201-184-7

· **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

Societa 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**



GHS06 teschio e tibie incrociate

Acute Tox. 2      H300 Letale se ingerito.

Aquatic Chronic 3 H412 Nocivo per gli organismi acquatici con effetti di lunga durata.

· **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**



GHS06

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**  
tiosemicarbazide

(continua a pagina 2)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.11.2015

Revisione: 12.11.2015

**Denominazione commerciale: THIOSEMICARBAZIDE**

(Segue da pagina 1)

- **Indicazioni di pericolo**
  - H300 Letale se ingerito.
  - H412 Nocivo per gli organismi acquatici con effetti di lunga durata.
- **Consigli di prudenza**
  - P273 Non disperdere nell'ambiente.
  - P264 Lavare accuratamente dopo l'uso.
  - P301+P310 IN CASO DI INGESTIONE: contattare immediatamente un CENTRO ANTIVELENI/un medico.
  - P321 Trattamento specifico (vedere su questa etichetta).
  - 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**
  - 79-19-6 tiosemicarbazide
- **Numerali di identificazione**
- **Numerali CE:** 201-184-7

### SEZIONE 4: Misure di primo soccorso

- **4.1 Descrizione delle misure di primo soccorso**
- **Indicazioni generali:**
  - Allontanare immediatamente gli abiti contaminati dal prodotto.
  - In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.
- **Inalazione:** Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.
- **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.
- **Contatto con gli occhi:**
  - Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.
- **Ingestione:** Non provocare il vomito, chiamare subito 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:**
  - CO<sub>2</sub>, 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.

IT

(continua a pagina 3)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.11.2015

Revisione: 12.11.2015

Denominazione commerciale: **THIOSEMICARBAZIDE**

(Segue da pagina 2)

### 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:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **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** Accurata captazione delle polveri.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **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.
- **Maschera protettiva:** Non necessario.
- **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.

(continua a pagina 4)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.11.2015

Revisione: 12.11.2015

Denominazione commerciale: **THIOSEMICARBAZIDE**

(Segue da pagina 3)

- **Tempo di permeazione del materiale dei guanti**  
Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.
- **Occhiali protettivi:** Non necessario.

### SEZIONE 9: Proprietà fisiche e chimiche

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

##### · Indicazioni generali

##### · Aspetto:

**Forma:** Cristallino

**Colore:** Beige

· **Odore:** Caratteristico

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non applicabile.

##### · Cambiamento di stato

**Temperatura di fusione/ambito di fusione:** 181-184 °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:**

Insolubile.

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

##### · Viscosità:

**Dinamica:** Non applicabile.

**Cinematica:** Non applicabile.

##### · Tenore del solvente:

**Solventi organici:** 0,0 %

**VOC (CE)** 0,00 %

**Contenuto solido:** 99,0 %

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

IT

(continua a pagina 5)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.11.2015

Revisione: 12.11.2015

**Denominazione commerciale: THIOSEMICARBAZIDE**

(Segue da pagina 4)

### 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:**
- **Corrosione/irritazione cutanea** Non ha effetti irritanti.
- **Lesioni oculari gravi/irritazioni oculari gravi** Non irritante.
- **Sensibilizzazione respiratoria o cutanea** Non si conoscono effetti sensibilizzanti.

### 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:**  
Pericolosità per le acque classe 3 (D) (Classif. secondo le liste): molto pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.  
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di quantità minime di prodotto.
- **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

- **14.1 Numero ONU**
- **ADR, IMDG, IATA**

UN2811

(continua a pagina 6)


**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.11.2015

Revisione: 12.11.2015

**Denominazione commerciale: THIOSEMICARBAZIDE**

(Segue da pagina 5)

<ul style="list-style-type: none"> <li>· <b>14.2 Nome di spedizione dell'ONU</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>2811 SOLIDO ORGANICO TOSSICO, N.A.S. TOXIC SOLID, ORGANIC, N.O.S.</p>
<ul style="list-style-type: none"> <li>· <b>14.3 Classi di pericolo connesso al trasporto</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	
	
<ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Etichetta</b></li> </ul>	<p>6.1 Materie tossiche 6.1</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Gruppo di imballaggio</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<p>II</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Pericoli per l'ambiente:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	<p>No</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Precauzioni speciali per gli utilizzatori</b></li> <li>· <b>Numero Kemler:</b></li> <li>· <b>Numero EMS:</b></li> </ul>	<p>Attenzione: Materie tossiche 60 F-A,S-A</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL 73/78 ed il codice IBC</b></li> </ul>	<p>Non applicabile.</p>
<ul style="list-style-type: none"> <li>· <b>Trasporto/ulteriori indicazioni:</b></li> <li>· <b>ADR</b></li> <li>· <b>Quantità limitate (LQ)</b></li> <li>· <b>Quantità esenti (EQ)</b></li> <li>· <b>Categoria di trasporto</b></li> <li>· <b>Codice di restrizione in galleria</b></li> </ul>	<p>500 g Codice: E4 Quantità massima netta per imballaggio interno: 1 g Quantità massima netta per imballaggio esterno: 500 g 2 D/E</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN2811, SOLIDO ORGANICO TOSSICO, N.A.S., 6.1, II</p>

### SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Norme e legislazione su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** La sostanza non è contenuta
- **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:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

(continua a pagina 7)



**Scheda di dati di sicurezza**  
**ai sensi del regolamento 1907/2006/CE, Articolo 31**

Stampato il: 12.11.2015

Revisione: 12.11.2015

**Denominazione commerciale: THIOSEMICARBAZIDE**

(Segue da pagina 6)

*EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**Acute Tox. 2: Acute toxicity, Hazard Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3*

IT

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

### 1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명: THIOSEMICARBAZIDE**
- **상품번호: 22000**
- **CAS-번호**  
79-19-6
- **EC 의번호:**  
201-184-7
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실 화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조사/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**



두개골과 대퇴골

급성 독성(경구) 구분2 H300 삼키면 치명적임

수생환경유해성-만성 구분3 H412 장기적인 영향에 의해 수생생물에게 유해함

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



GHS06

- **신호어 위험**
- **상표상에명확히위험성이표시된성분:**  
thiosemicarbazide

(2 쪽에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

**제품명: THIOSEMICARBAZIDE**

(1 쪽부터계속)

- **유해.위험 문구**  
삼키면 치명적임  
장기적인 영향에 의해 수생생물에게 유해함
- **예방조치 문구**  
취급 후에는 취급 부위를 철저히 씻으시오.  
이 제품을 사용할 때에는 먹거나, 마시거나 흡연하지 마시오.  
삼켰을 시: 즉시 독성물질센터/병원 연락 필요.  
(라벨 참조) 처치를 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**  
79-19-6 thiosemicarbazide
- **식별 번호**
- **EC 의번호:** 201-184-7

### 4 응급조치 요령

- **응급조치요령 내용**
- **일 반 적 정 보:**  
이 제품에 의해 오염 된 의상은 즉시 제거 한다.  
불규 칙 적 인 호 흡 이 나 호 흡 정 지 상 태 에 서 는 인 공 호 흡 을 실 시 한 다.
- **흡입했을 때:** 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.
- **눈에 들어갔을 때:** 흐르는 물에 눈을 몇분동안 씻어내고 나서, 의사와 상담한 다
- **먹었을 때:** 구토를 유발 시키 지 않 는 다. 즉 시 의 료 진 의 도 움 을 구 한 다.
- **기타 의사의 주의사항:**
- **가장 중요한 급·만성 증상 및 영향** 추가적인 정보가 존재하지 않습니다.
- **즉각적인 의료처치 및 특별치료가 필요함을 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 하 거 나 알 코 올 이 함유 된 거 폼 으 로 끈 다.
- **본 화학물질이나 혼합물에서 발생하는 특별 유해성** 추가적인 정보가 존재하지 않습니다.
- **소방관에 대한 권고사항**
- **화재 진압 시 착용할 보호구 및 예방조치:** 특별한 조 치 가 필요없음.

### 6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 필요없음.

(3 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

**제품명: THIOSEMICARBAZIDE**

(2 쪽부터계속)

- **환경 관련 예방조치:** 하수도망/해수면위의물/지하수로도달하지않게한다.
- **밀폐 및 정화 방법과 소재:** 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
- **타 섹션 참조**  
 안전 관리에 대한 정보는 제7 장 을 참고하시오.  
 개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.  
 쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

### 7 취급 및 저장방법

- **취급:**  
 안전 취급을 위한 예방조치 철저한 먼지 제거.  
 화재 및 폭발 사고 예방대책에 관한 정보: 특별한 조치가 필요없음.
- **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. 항 목 7 을 참고하시오.
- **통제 변수**
- **화학물질의 노출기준, 생물학적 노출기준 등:** 생략
- **추 가 정보:** 제 조 할 당시에 유 효 한 목 록 을 기초로 사용했다.
- **노출 통제**
- **개인 보호구**
- **일반적보호조치및위생조치:**  
 식료품, 음료수와 사료로부터 멀리 떨어져 뜨려 놓는다.  
 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.  
 휴식 전 이 나 작업이 끝날때마다 손을 씻는다.
- **호흡기 보호:** 필요없음.
- **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.  
 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.  
 투과 시간, 침투율 과 저하를 고려해서 장갑 재료를 선택한다.

- **장갑 의 재료**  
 적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업자에따라서도다  
 르게선정되어야한다.
- **장갑 재료 의 투과 시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.
- **눈 보호:** 필요 없음.

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(4 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

**제품명: THIOSEMICARBAZIDE**

(3 쪽부터계속)

### 9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보	
· 일반정보	
· 외형	
· 물리적 상태:	수정
· 색:	베이지색
· 냄새:	특색있는
· 후각역치	알맞지않다.
· pH:	해당사항 없음.
· 상태변화	
· 녹는점/어는점:	181-184 °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:	불용해성의
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	해당사항 없음.
· 동점성:	해당사항 없음.
· 용매내용물	
· 유기용매:	0.0 %
· VOC (EU)	0.00 %
· 고체의 함량:	99.0 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

- 반응성
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는 없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.

(5 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

**제품명: THIOSEMICARBAZIDE**

(4 쪽부터계속)

- **피해야 할 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 금지 물질:** 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성있는분해물들은알려지지않았다.

### 11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- **급성 독성:**
- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 무자극
- **심한 눈 손상 또는 자극성:** 무자극.
- **감각화:** 민감한영향이없는것으로알려져있다.

### 12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**
- **일반 특징:**  
수질오염등급 3 (목록분류): 심하게수질오염이된 지하수나, 하천으로또는 하수도망에도달하지않게한다. 역시극소수의양이라도안된다. 지하수로아주미세한양이유입되었을경우엔이미식수오염상태이다
- **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

- |                          |                                   |
|--------------------------|-----------------------------------|
| · <b>유엔 번호</b>           |                                   |
| · <b>ADR, IMDG, IATA</b> | UN2811                            |
| · <b>UN 적정 선적명</b>       |                                   |
| · <b>ADR</b>             | 2811 TOXIC SOLID, ORGANIC, N.O.S. |
| · <b>IMDG, IATA</b>      | TOXIC SOLID, ORGANIC, N.O.S.      |

(6 쪽에계속)

# 안전지침서


## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

**제품명: THIOSEMICARBAZIDE**

(5 쪽부터계속)

<ul style="list-style-type: none"> <li>· 교통 위험 클래스</li> <li>· ADR, IMDG, IATA</li> </ul>	
	
<ul style="list-style-type: none"> <li>· 등급</li> <li>· 위험물 라벨</li> </ul>	6.1 독성물질 6.1
<ul style="list-style-type: none"> <li>· 용기등급</li> <li>· ADR, IMDG, IATA</li> </ul>	II
<ul style="list-style-type: none"> <li>· 환경적 유해물질:</li> <li>· 해양오염물질:</li> </ul>	아니오
<ul style="list-style-type: none"> <li>· 이용자 특별 예방조치</li> <li>· 위험 코드:</li> <li>· EMS-번호:</li> </ul>	경고: 독성물질 60 F-A,S-A
<ul style="list-style-type: none"> <li>· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송</li> </ul>	해당사항 없음.
<ul style="list-style-type: none"> <li>· 운 송/추가 정보:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· 한정 수량 (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	500 g Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g
<ul style="list-style-type: none"> <li>· 운송 구분</li> <li>· 터널 제한 코드</li> </ul>	2 D/E
<ul style="list-style-type: none"> <li>· UN "모범 규제":</li> </ul>	UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, II

### 15 법적 규제현황

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

· Korean Existing Chemical Inventory		
79-19-6	thiosemicarbazide	KE-19982

· GHS 라벨 요소  
본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· 위험 도표



GHS06

· 표지어 위험

· 상표상에명확히위험성이표시된성분:  
thiosemicarbazide

(7 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.11.12

개정: 2015.11.12

**제품명: THIOSEMICARBAZIDE**

(6 쪽부터계속)

- **위험 문구**  
삼키면 치명적임  
장기적인 영향에 의해 수생생물에게 유해함
- **주의 문구**  
취급 후에는 취급 부위를 철저히 씻으시오.  
이 제품을 사용할 때에는 먹거나, 마시거나 흡연하지 마시오.  
삼켰을 시: 즉시 독성물질센터/병원 연락 필요.  
(라벨 참조) 처치를 하시오.  
잠금장치가 있는 저장장소에 저장 하시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

### 16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

- **최초 작성일자:** 2015.11.12
- **개정 횟수 및 최종 개정일자:** 1 / 2015.11.12
- **약어와 두문자어:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

급성 독성(경구) 구분2: Acute toxicity, Hazard Category 2

수생환경유해성-만성 구분3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

KR



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.11.2015

Revisión: 12.11.2015

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

#### · 1.1 Identificador del producto

· Nombre comercial: THIOSEMICARBAZIDE

· Número del artículo: 22000

· Número CAS:

79-19-6

· Número CE:

201-184-7

· 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



GHS06 calavera y tibias cruzadas

Acute Tox. 2

H300 Mortal en caso de ingestión.

Aquatic Chronic 3 H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

· 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



GHS06

· Palabra de advertencia Peligro

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.11.2015

Revisión: 12.11.2015

**Nombre comercial: THIOSEMICARBAZIDE**

( se continua en página 1 )

- **Componentes peligrosos a indicar en el etiquetaje:**  
tiosemicarbazida
- **Indicaciones de peligro**  
H300 Mortal en caso de ingestión.  
H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.
- **Consejos de prudencia**  
P273 Evitar su liberación al medio ambiente.  
P264 Lavarse concienzudamente tras la manipulación.  
P301+P310 EN CASO DE INGESTIÓN: Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.  
P321 Se necesita un tratamiento específico (ver en esta etiqueta).  
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**  
79-19-6 tiosemicarbazida
- **Número(s) de identificación**
- **Número CE:** 201-184-7

### SECCIÓN 4: Primeros auxilios

- **4.1 Descripción de los primeros auxilios**
- **Instrucciones generales:**  
Quitarse de inmediato toda prenda contaminada con el producto.  
En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.
- **En caso de inhalación del producto:**  
Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.
- **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.
- **En caso de con los ojos:**  
Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.
- **En caso de ingestión:** No provocar el vómito y solicitar asistencia médica inmediata.
- **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:**  
CO<sub>2</sub>, 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.

( se continua en página 3 )

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## según 1907/2006/CE, Artículo 31

fecha de impresión 12.11.2015

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**Nombre comercial: THIOSEMICARBAZIDE**

( se continua en página 2 )

- **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:**  
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **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** Desempolvar cuidadosamente.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **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.
- **Protección respiratoria:** No es necesario.
- **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.

( se continua en página 4 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.11.2015

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Nombre comercial: **THIOSEMICARBAZIDE**

( se continua en página 3 )

- **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.

- **Protección de ojos:** No es necesario.

### SECCIÓN 9: Propiedades físicas y químicas

- **9.1 Información sobre propiedades físicas y químicas básicas**

- **Datos generales**

- **Aspecto:**

**Forma:** Cristalino

**Color:** Beige

- **Olor:** Característico

- **Umbral olfativo:** No determinado.

- **valor pH:** No aplicable.

- **Cambio de estado**

**Punto de fusión /campo de fusión:** 181-184 °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:**

Insoluble.

- **Coefficiente de reparto (n-octanol/agua):** No determinado.

- **Viscosidad:**

**Dinámica:** No aplicable.

**Cinemática:** No aplicable.

- **Concentración del disolvente:**

**Disolventes orgánicos:** 0,0 %

**VOC (CE)** 0,00 %

( se continua en página 5 )

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## según 1907/2006/CE, Artículo 31

fecha de impresión 12.11.2015

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Nombre comercial: **THIOSEMICARBAZIDE**

( se continua en página 4 )

- |                                      |  |
|--------------------------------------|--|
| <b>Contenido de cuerpos sólidos:</b> | 99,0 %                                       |
| <b>· 9.2 Información adicional</b>   | No existen más datos relevantes disponibles. |

### 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:**
- **Corrosión o irritación cutáneas** No produce irritaciones.
- **Lesiones o irritación ocular graves** No produce irritaciones.
- **Sensibilización respiratoria o cutánea** No se conoce ningún efecto sensibilizante.

### 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:**  
Nivel de riesgo para el agua 3 (clasificación de listas): muy peligroso para el agua  
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados, ni siquiera en pequeñas cantidades.  
Una cantidad ínfima vertida en el subsuelo ya representa un peligro para el agua potable.
- **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.

( se continua en página 6 )

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( se continua en página 5 )

- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### SECCIÓN 14: Información relativa al transporte

· 14.1 Número UN	
· ADR, IMDG, IATA	UN2811
· 14.2 Designación oficial de transporte de las Naciones Unidas	
· ADR	2811 SÓLIDO TÓXICO, ORGÁNICO, N.E.P.
· IMDG, IATA	TOXIC SOLID, ORGANIC, N.O.S.
· 14.3 Clase(s) de peligro para el transporte	
· ADR, IMDG, IATA	
	
· Clase	6.1 Materias tóxicas
· Etiqueta	6.1
· 14.4 Grupo de embalaje	
· ADR, IMDG, IATA	II
· 14.5 Peligros para el medio ambiente:	
· Contaminante marino:	No
· 14.6 Precauciones particulares para los usuarios	Atención: Materias tóxicas
· Número Kemler:	60
· Número EMS:	F-A,S-A
· 14.7 Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR	
· Cantidades limitadas (LQ)	500 g
· Cantidades exceptuadas (EQ)	Código: E4 Cantidad neta máxima por envase interior: 1 g Cantidad neta máxima por embalaje exterior: 500 g
· Categoría de transporte	2
· Código de restricción del túnel	D/E
· "Reglamentación Modelo" de la UNECE:	UN2811, SÓLIDO TÓXICO, ORGÁNICO, N.E.P., 6.1, II

### SECCIÓN 15: Información reglamentaria

- 15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla
- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I No contiene la sustancia.

( se continua en página 7 )

**Ficha de datos de seguridad**  
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( se continua en página 6 )

**· 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:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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)

VOC: Volatile Organic Compounds (USA, EU)

Acute Tox. 2: Acute toxicity, Hazard Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

ES