

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

## 1 Identification

- **Product identifier**
  - **Trade name:** SEC1222 B
  - **Application of the substance / the mixture** Epoxy Hardener
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
ResinLab, LLC  
N109 W13300 Ellsworth Drive  
Germantown, WI 53022  
1-877-259-1669  
www.resinlab.com
  - **Information Department:** Product Safety Department: msds@resinlab.com
  - **Emergency Telephone Number:**  
North America - Chemtrec: 1-800-424-9300 (24 hours)  
International - Chemtrec: 01-703-527-3887 (24 hours)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2A H319 Causes serious eye irritation.
  - Skin Sens. 1 H317 May cause an allergic skin reaction.
  - Repr. 2 H361 Suspected of damaging fertility or the unborn child.
- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**




GHS07
GHS08
  - **Signal word** Warning
  - **Hazard-determining components of labeling:**
    - Silver
    - 4-Nonylphenol, branched
    - 4,7,10-Trioxatridecane-1,13-Diamene
    - N-(2-Aminoethyl)piperazine
    - Triethylenetetramine
  - **Hazard statements**
    - H315 Causes skin irritation.
    - H319 Causes serious eye irritation.
    - H317 May cause an allergic skin reaction.
    - H361 Suspected of damaging fertility or the unborn child.
  - **Precautionary statements**
    - Obtain special instructions before use.
    - Do not handle until all safety precautions have been read and understood.
    - Avoid breathing dust/fume/gas/mist/vapors/spray
    - Wash thoroughly after handling.
    - Contaminated work clothing must not be allowed out of the workplace.
    - Wear protective gloves/protective clothing/eye protection/face protection.
    - IF ON SKIN: Wash with plenty of water.
    - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
    - IF exposed or concerned: Get medical advice/attention.
    - If skin irritation or rash occurs: Get medical advice/attention.
    - If eye irritation persists: Get medical advice/attention.
    - Wash contaminated clothing before reuse.
    - Store locked up.
    - Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
  - **NFPA System**
    - **NFPA ratings (scale 0 - 4)**



Health = 3  
Fire = 1  
Reactivity = 0
  - **NFPA special hazards (water reactivity and oxidizing property):** None
- **HMIS System**
  - **HMIS-ratings (scale 0 - 4)**

HEALTH	*3
FIRE	1
REACTIVITY	0

Health = \*3  
Fire = 1  
Reactivity = 0
- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.

(Contd. on page 2)

# Safety Data Sheet acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

Trade name: SEC1222 B

• vPvB: Not applicable.

(Contd. of page 1)

## 3 Composition/information on ingredients

### • Chemical characterization: Mixtures

#### • Dangerous components:

CAS: 7440-22-4 EINECS: 231-131-3	Silver	Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Eye Irrit. 2A, H319	80-90%
CAS: 84852-15-3 EINECS: 284-625-5 Index number: 601-053-00-8	4-Nonylphenol, branched	Repr. 2, H361 Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Chronic 1, H410 Acute Tox. 4, H302	1-2.5%
CAS: 4246-51-9 EINECS: 224-207-2	4,7,10-Trioxatridecane-1,13-Diamene	Skin Corr. 1B, H314 Skin Sens. 1, H317	1-2.5%
CAS: 140-31-8 EINECS: 205-411-0 Index number: 612-105-00-4 RTECS: TK 8050000	N-(2-Aminoethyl)piperazine	Acute Tox. 3, H311 Skin Corr. 1B, H314 Acute Tox. 4, H302; Skin Sens. 1, H317 Aquatic Chronic 3, H412	0.1-1%
CAS: 112-24-3 EINECS: 203-950-6 Index number: 612-059-00-5 RTECS: YE6650000	Triethylenetetramine	Skin Corr. 1B, H314 Acute Tox. 4, H312; Skin Sens. 1, H317 Aquatic Chronic 3, H412	0.1-1%

#### • Additional information:

If the chemical name/CAS number is proprietary and or weight percentage is listed as a range, the specific chemical identity and or percentage of composition has been withheld as a trade secret.

## 4 First-aid measures

### • Description of first aid measures

• **General information:** Keep warm, position comfortably and cover well.

#### • After inhalation:

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing. Supply fresh air and if symptoms occur call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

#### • After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Remove all contaminated clothing and wash before reuse.

If skin rash or irritation occurs, seek medical advice.

#### • After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Remove contact lenses if present and easy to do so; continue rinsing.

If symptoms develop seek medical attention.

#### • After swallowing:

If victim is unconscious; never give anything by mouth.

Rinse out mouth and then drink plenty of water.

Get medical attention if you feel unwell.

#### • 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**

Check section 11 Toxicological Information for further relevant information.

## 5 Fire-fighting measures

### • Extinguishing media

#### • Suitable extinguishing agents:

Use fire fighting measures that suit the environment.

Limestone powder

Use powder approved for Class D metal fires.

### • Special hazards arising from the substance or mixture

In case of fire, the following can be released:

May generate ammonia gas.

nitric acid

nitrosamine

Silver (Ag) dust

Carbon dioxide (CO<sub>2</sub>) and Carbon monoxide (CO)

Nitrogen oxides

### • Advice for firefighters

#### • Protective equipment:

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).

As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

## 6 Accidental release measures

### • Personal precautions, protective equipment and emergency procedures

Wear protective clothing.

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.

(Contd. on page 3)

US

## Safety Data Sheet acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

Trade name: SEC1222 B

(Contd. of page 2)

- **Environmental precautions:**  
Do not allow to enter sewers/ surface or ground water.  
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**  
For large spills: provide diking or containment to minimize spreading. If possible pump and store material in appropriate container.  
For small spills: Ventilate and wash area. Collect spills and absorbant material in appropriate container.  
Ensure adequate ventilation.  
Allow molten product to cool.  
Non sparking tools should be used.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.

### 7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**  
Avoid breathing vapor or spray mists.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.  
Keep away from incompatible material(s).  
Avoid any release into the environment.  
For industrial or professional use only.  
Do not breathe dust/fumes/mist/vapor/spray.  
Avoid contact with eyes, skin and clothing.  
Keep away from heat, sparks, flames and ignition sources.  
Observe all the personal protection requirements in Section 8.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:**  
Provide ventilation for receptacles.  
Keep stored in accordance with local, regional, national, and international regulations.

### 8 Exposure controls/personal protection

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

#### 84852-15-3 4-Nonylphenol, branched

TEEL-1	Short-term value: 20 mg/m <sup>3</sup>
TEEL-2	Short-term value: 125 mg/m <sup>3</sup>
TEEL-3	Short-term value: 500 mg/m <sup>3</sup>

#### 140-31-8 N-(2-Aminoethyl)piperazine

TEEL-1	Short-term value: 7.5 mg/m <sup>3</sup>
TEEL-2	Short-term value: 50.0 mg/m <sup>3</sup>
TEEL-3	Short-term value: 500 mg/m <sup>3</sup>

#### 112-24-3 Triethylenetetramine

WEEL	Long-term value: 6 mg/m <sup>3</sup> , 1 ppm
Skin	

- **Additional Occupational Exposure Limit Values for possible hazards during processing:** None.

- **Exposure controls**  
If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

If exposure limits have not been established, maintain airborne levels to an acceptable level.

- **Personal protective equipment:**

- **General protective and hygienic measures:**  
Be sure to clean skin thoroughly after work and before breaks.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
Pregnant women should avoid direct skin contact with this product.

- **Personal Protective Equipment (PPE)**

- **Breathing equipment:**  
Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.  
Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**



Chemical resistant gloves

(Contd. on page 4)

# Safety Data Sheet acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

Trade name: SEC1222 B

(Contd. of page 3)

## Eye protection:



Safety Glasses with side shields

## Body protection: Appropriate chemical resistant clothing.

## Limitation and supervision of exposure into the environment

The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

#### Form:

Liquid

#### Color:

Silver-colored

#### Odor:

Characteristic

#### Odor threshold:

Not determined.

#### pH-value:

Not determined.

#### Change in condition

#### Melting point/Melting range:

Undetermined.

#### Boiling point/Boiling range:

Undetermined.

#### Flash point:

&gt;185°C (°F)

#### Flammability (solid, gaseous):

Not applicable.

#### Ignition temperature:

Not determined.

#### Decomposition temperature:

Not determined.

#### Auto igniting:

Product is not selfigniting.

#### Danger of explosion:

Product does not present an explosion hazard.

#### Explosion limits:

#### Lower:

Not determined.

#### Upper:

Not determined.

#### Vapor pressure:

Not determined.

#### Vapor Density:

not determined

#### Density at 20°C (68 °F):

2.74 g/cm³ (lbs/gal)

#### Relative density

Not determined.

#### Vapor density

Not determined.

#### Evaporation rate

Not determined.

#### Solubility in / Miscibility with

#### Water:

Not miscible or difficult to mix.

#### Partition coefficient (n-octanol/water):

Not determined.

#### Viscosity:

#### Dynamic:

Not available.

#### Kinematic:

Not available.

## 10 Stability and reactivity

### Reactivity Not a regulated physical hazard under GHS.

#### Hazardous Reactivity and Chemical Stability Stable under normal conditions of use, storage and temperatures.

#### Thermal decomposition / conditions to be avoided:

To avoid thermal decomposition do not overheat.

No decomposition if used and stored according to specifications.

### Possibility of hazardous reactions

Polymerization occurs with mineral acids.

Violent reaction with water at high temperatures.

### Conditions to avoid Keep away from heat, sparks, flame and any other ignition sources.

### Incompatible materials:

Acids

Peroxides

Oxidizing agents

Slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Sodium hypochlorite, Nitrous acid and other nitrosating agents

### Hazardous decomposition products:

Possible in traces.

Refer to section 5.

### Additional information:

As long as the prescribed application concentrations are maintained there is no danger that stable emulsions will form.

(Contd. on page 5)

# Safety Data Sheet acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

Trade name: SEC1222 B

(Contd. of page 4)

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values that are relevant for classification:

 If swallowed, may cause:  
 abnormal pain

#### 84852-15-3 4-Nonylphenol, branched

Oral LD50 1,620 mg/kg (rat)

Dermal LD50 2,031 mg/kg (rat)

#### 4246-51-9 4,7,10-Trioxatridecane-1,13-Diamene

Oral LD50 3,160 mg/kg (rat)

Dermal LD50 2,500 mg/kg (rabbit)

**Specific symptoms in biological assay:** No further relevant information available; classification is not possible.

#### Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

**Sensitization:** Sensitization possible through skin contact.

#### Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

#### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

#### NTP (National Toxicology Program)

None of the ingredients is listed.

#### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

## 12 Ecological information

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

### Behavior in environmental systems:

**Bioaccumulative potential:** No data available.

**Mobility in soil:** No further relevant information available.

**Additional ecological information:** The product is non-rapid degradable, and low or not highly bioaccumulative.

#### General notes:

Do not allow product to reach ground water, water course or sewage system.

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

### Results of PBT and vPvB assessment

**PBT:** None of the ingredients is listed.

**vPvB:** None of the ingredients is listed.

**Other adverse effects:** No further relevant information available.

## 13 Disposal considerations

### Waste treatment methods

#### RCRA Waste:

7440-22-4 Silver

D011 80-90%

#### Recommendation:

Must be specially treated adhering to official regulations.

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

### Uncleaned packagings:

**Recommendation:** Dispose of according to your local waste regulations.

## 14 Transport information

### UN-Number

DOT, IMDG, IATA

UN3082

### UN proper shipping name

DOT

Environmentally hazardous substances, liquid, n.o.s. (Epoxy Hardener)

IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (Epoxy Hardener), MARINE POLLUTANT

IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (Epoxy Hardener)

(Contd. on page 6)

US

# Safety Data Sheet acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

Trade name: SEC1222 B

(Contd. of page 5)

**Transport hazard class(es)**
**DOT, IMDG, IATA**

 Class  
Label

 9 Miscellaneous dangerous substances and articles  
9

**Packing group**
**DOT, IMDG, IATA**

III

**Environmental hazards:**

Not applicable.

**Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

**Danger code (Kemler):**

90

**EMS Number:**

F-A,S-F

**Stowage Category**

A

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

Not applicable.

**Transport/Additional information:**
**DOT**
**Quantity limitations**

On passenger aircraft/rail: No limit

On cargo aircraft only: No limit

**Remarks:**

Special marking with the symbol (fish and tree).

**IMDG**
**Limited quantities (LQ)**

5L

**Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

**UN "Model Regulation":**

 UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES,  
LIQUID, N.O.S. (EPOXY HARDENER), 9, III

## 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**SARA Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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

7440-22-4 Silver

80-90%

84852-15-3 4-Nonylphenol, branched

1-2.5%

**SARA Section 311/312 (Hazardous Chemical Inventory Reporting)**

84852-15-3 4-Nonylphenol, branched

A

1-2.5%

140-31-8 N-(2-Aminoethyl)piperazine

A, C

0.1-1%

112-24-3 Triethylenetetramine

A

0.1-1%

**Hazard Abbreviations for SARA 311/312**

A - Acute Health Hazard

C - Chronic Health Hazard

F - Fire Hazard

R - Reactive Hazard

S - Sudden Release of Pressure Hazard

**TSCA (Toxic Substances Control Act):**

7440-22-4 Silver

84852-15-3 4-Nonylphenol, branched

140-31-8 N-(2-Aminoethyl)piperazine

112-24-3 Triethylenetetramine

**Proposition 65**
**Chemicals known to cause cancer:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

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

7440-22-4 Silver

D

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

(Contd. on page 7)

# Safety Data Sheet acc. to OSHA HCS

Printing date 08/16/2017

Reviewed on 08/16/2017

Trade name: SEC1222 B

(Contd. of page 6)

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

None of the ingredients is listed.

 · **International Regulation Lists**

 · **Chinese Chemical Inventory of Existing Chemical Substances:**

7440-22-4	Silver
84852-15-3	4-Nonylphenol, branched
140-31-8	N-(2-Aminoethyl)piperazine
112-24-3	Triethylenetetramine

 · **GHS label elements** GHS label elements

 · **National regulations:**

 · **Japanese Existing and New Chemical Substance List:**

7440-22-4	Silver
84852-15-3	4-Nonylphenol, branched
140-31-8	N-(2-Aminoethyl)piperazine
112-24-3	Triethylenetetramine

 · **Korean Existing Chemical Inventory:**

7440-22-4	Silver
84852-15-3	4-Nonylphenol, branched
140-31-8	N-(2-Aminoethyl)piperazine
112-24-3	Triethylenetetramine

 · **European Pre-registered substances:**

7440-22-4	Silver
84852-15-3	4-Nonylphenol, branched
140-31-8	N-(2-Aminoethyl)piperazine
112-24-3	Triethylenetetramine

 · **EINECS List:**

7440-22-4	Silver
84852-15-3	4-Nonylphenol, branched
4246-51-9	4,7,10-Trioxatridecane-1,13-Diamene
140-31-8	N-(2-Aminoethyl)piperazine
112-24-3	Triethylenetetramine

 · **ELINCS List:**

None of the ingredients is listed.

 · **REACH - Substances of Very High Concern (SVHC) List:**

84852-15-3	4-Nonylphenol, branched	1-2.5%
------------	-------------------------	--------

 · **Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is 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.

 · **Department Issuing (M)SDS:** Product Development Department

 · **Contact:** msds@resinlab.com

 · **Date of preparation / last revision** 08/16/2017 / 3

 · **\* Data compared to the previous version altered.**

US