

**Kit Components**

Product code	Description
<b>VT923</b>	<b>Vibra-TITE® Epoxy 923 Aluminum Bonder</b>

## Components:

VT923A	Vibra-TITE® Epoxy 923 Aluminum Bonder - Part A - Resin
VT923B	Vibra-TITE® Epoxy 923 Aluminum Bonder - Part B - Hardener

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

## 1 Identification

**- Product identifier**

**- Trade name:** Vibra-TITE® Epoxy

**- Synonyms:** 923 Aluminum Bonder - Part A - Resin

**- Part number:** VT923A

**- Application of the substance / the mixture** Adhesives

**- Details of the supplier of the safety data sheet**

**- Manufacturer/Supplier:**

ND Industries, Inc  
1000 North Crooks Road  
Clawson, MI 48017  
USA  
Telephone: +1-248-288-0000  
Email: info@ndindustries.com  
Website: www.ndindustries.com

**- Information department:** Product Safety Department

**- Emergency telephone number:**

United States: 1-800-424-9300

International: +1-703-527-3887

## \* 2 Hazard(s) identification

**- Classification of the substance or mixture**



GHS07

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.

STOT SE 3 H335 May cause respiratory irritation.

**- Label elements**

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

**- Hazard pictograms**



GHS07

**- Signal word** Warning

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

Bisphenol-A epoxy resin

Bisphenol F epoxy resin

**- Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

**- Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P264 Wash face, hands and any exposed skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves.

P280 Wear eye protection / face protection.

P302+P352 If on skin: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

P362+P364 Take off contaminated clothing and wash it before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 1)

P321	Specific treatment (see on this label).
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**- Classification system:****- NFPA ratings (scale 0 - 4)**

2	1	0	Health = 2
			Fire = 1
			Reactivity = 0

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

HEALTH 2	Health = 2
FIRE 1	Fire = 1
REACTIVITY 0	Reactivity = 0

**- Other hazards****- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Description:** Mixture of the substances listed below with nonhazardous additions.

**- Dangerous components:**

CAS	Substance	Hazard	Concentration
25068-38-6	Bisphenol-A epoxy resin	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	60 – 69%
9003-36-5	Bisphenol F epoxy resin	Skin Irrit. 2, H315; Skin Sens. 1, H317	30 – 39%
67762-90-7	Amorphous Silica	Combustible Dust	1 – 4%

### 4 First-aid measures

**- Description of first aid measures****- After inhalation:**

Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.  
Supply fresh air; consult doctor in case of complaints.

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

- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

**- 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:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

### 6 Accidental release measures

**- Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation  
Wear protective clothing.

**- Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

**- Methods and material for containment and cleaning up:**

Ensure adequate ventilation.  
Dispose of the collected material according to regulations.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 2)

## - 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

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

#### - 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:** Keep receptacle tightly sealed.

#### - Specific end use(s) No further relevant information available.

## 8 Exposure controls/personal protection

### - Additional information about design of technical systems: No further data; see item 7.

### - Control parameters

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

- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.
- Avoid contact with the eyes and skin.

##### - Breathing equipment:

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

##### - Protection of hands:



Protective gloves

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

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

##### - 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.

##### - As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR

##### - Eye protection:



Tightly sealed goggles

##### - Body protection: Protective work clothing

## 9 Physical and chemical properties

### - Information on basic physical and chemical properties

#### - General Information

##### - Appearance:

- **Form:** Viscous
- **Color:** Whitish
- **Odor:** Characteristic

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 3)

- <b>Odor threshold:</b>	Not determined.
- <b>pH-value:</b>	Not determined.
- <b>Change in condition</b>	
- <b>Melting point/Melting range:</b>	Undetermined.
- <b>Boiling point/Boiling range:</b>	> 200 °C (> 392 °F)
- <b>Flash point:</b>	95 °C (203 °F)
- <b>Flammability (solid, gaseous):</b>	Not applicable.
- <b>Decomposition temperature:</b>	Not determined.
- <b>Auto igniting:</b>	Product is not selfigniting.
- <b>Danger of explosion:</b>	Product does not present an explosion hazard.
- <b>Explosion limits:</b>	
- <b>Lower:</b>	Not determined.
- <b>Upper:</b>	Not determined.
- <b>Vapor pressure:</b>	Not determined.
- <b>Density at 20 °C (68 °F):</b>	~ 1.1859 g/cm <sup>3</sup> (~ 9.89634 lbs/gal)
- <b>Relative density</b>	Not determined.
- <b>Vapor density</b>	Not determined.
- <b>Evaporation rate</b>	Not determined.
- <b>Solubility in / Miscibility with</b>	
- <b>Water:</b>	Not miscible or difficult to mix.
- <b>Partition coefficient (n-octanol/water):</b>	Not determined.
- <b>Viscosity:</b>	
- <b>Dynamic at 20 °C (68 °F):</b>	65,000 mPas
- <b>Kinematic:</b>	Not determined.
- <b>Solvent content:</b>	
- <b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
- <b>Solids content:</b>	1.5 %
- <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
    - **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.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 4)

- **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 further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
  - **Remark:** Toxic for fish
- **Additional ecological information:**
  - **General notes:**
    - Water hazard class 2 (Self-assessment): hazardous for water
    - 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.
    - Also poisonous for fish and plankton in water bodies.
    - Toxic for aquatic organisms
- **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

<b>- UN-Number</b>	
- DOT, ADN, IMDG, IATA	not regulated
<b>- UN proper shipping name</b>	
- DOT, ADN, IMDG, IATA	not regulated
<b>- Transport hazard class(es)</b>	
- DOT, ADN, IMDG, IATA	
- Class	not regulated
<b>- Packing group</b>	
- DOT, IMDG, IATA	not regulated
<b>- Environmental hazards:</b>	
- Marine pollutant:	Yes
<b>- Special precautions for user</b>	Not applicable.
<b>- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>- UN "Model Regulation":</b>	not regulated

## \*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.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 5)

<b>- Hazardous Air Pollutants</b>
None of the ingredients is listed.
<b>- Proposition 65</b>
<b>- Chemicals known to cause cancer:</b>
None of the ingredients is listed.
<b>- Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.
<b>- Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.
<b>- Chemicals known to cause developmental toxicity:</b>
None of the ingredients is listed.
<b>- Carcinogenic categories</b>
<b>- EPA (Environmental Protection Agency)</b>
None of the ingredients is listed.
<b>- TLV (Threshold Limit Value established by ACGIH)</b>
None of the ingredients is listed.
<b>- NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
None of the ingredients is listed.
<b>- Chemical safety assessment:</b> 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 SDS:** ND Industries, Inc. - Safety, Health and Environmental Affaires
- **Contact:** Safety, Health and Environmental Affaires
- **Date of preparation / last revision** 04/30/2019 / 23

**- 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  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 VOC: Volatile Organic Compounds (USA, EU)  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 NIOSH: National Institute for Occupational Safety  
 OSHA: Occupational Safety & Health  
 TLV: Threshold Limit Value  
 PEL: Permissible Exposure Limit  
 REL: Recommended Exposure Limit  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
 Skin Sens. 1: Skin sensitisation – Category 1  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

**- Disclaimer**

The information set forth is based on information that ND Industries, Incorporated believes to be accurate. No warranty, expressed or implied, is intended. The information is provided solely for your information and consideration and ND Industries Inc. assumes no legal responsibility for use or reliance thereon. In the event of a discrepancy between the information on the non-English document and its English counterpart, the English version shall supersede.

©ND and ND Industries, Inc. are registered trademarks of ND Industries Incorporated,  
 ©Vibra-TITE is a registered trademark of ND Industries, Inc.

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

**1 Identification****- Product identifier**

- **Trade name:** Vibra-TITE® Epoxy
- **Synonyms:** 923 Aluminum Bonder - Part B - Hardener
- **Part number:** VT923B
- **Application of the substance / the mixture** Adhesives

**- Details of the supplier of the safety data sheet****- Manufacturer/Supplier:**

ND Industries, Inc  
1000 North Crooks Road  
Clawson, MI 48017  
USA  
Telephone: +1-248-288-0000  
Email: info@ndindustries.com  
Website: www.ndindustries.com

**- Information department:** Product Safety Department**- Emergency telephone number:**

United States: 1-800-424-9300  
International: +1-703-527-3887

**2 Hazard(s) identification****- Classification of the substance or mixture**

GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

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

GHS05 GHS06 GHS07 GHS08

**- Signal word** Danger**- Hazard-determining components of labeling:**

Curing agent  
Curing agent  
Benzyl alcohol  
Nonylphenol  
Fatty Acids, C18-unsatd, dimers, polymers with bisphenol A, epichlorohydrin, tall-oil fatty acids, tetraethylenepentamine and TETA triethylenetetramine  
Epoxy curing agent

**- Hazard statements**

H331 Toxic if inhaled.  
H314 Causes severe skin burns and eye damage.



# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 1)

H317 May cause an allergic skin reaction.  
 H361 Suspected of damaging fertility or the unborn child.

**- Precautionary statements**

P260 Do not breathe dusts or mists.  
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray  
 P264 Wash face, hands and any exposed skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P280 Wear protective gloves.  
 P280 Wear eye protection / face protection.  
 P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.  
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P311 Call a poison center/doctor.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a poison center/doctor.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P321 Specific treatment (see on this label).  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P363 Wash contaminated clothing before reuse.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**- Classification system:****- NFPA ratings (scale 0 - 4)****- HMIS-ratings (scale 0 - 4)****- Other hazards****- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Description:** Mixture of the substances listed below with nonhazardous additions.

**- Dangerous components:**

	Curing agent Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317	30 – 39%
CAS: 106906-26-7	Fatty Acids, C18-unsatd, dimers, polymers with bisphenol A, epichlorohydrin, tall-oil fatty acids, tetraethylenepentamine and TETA Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317	20 – 29%
	Curing agent Acute Tox. 2, H330; Repr. 2, H361; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; STOT SE 3, H335	10 – 19%
CAS: 100-51-6	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2A, H319	10 – 19%
CAS: 84852-15-3	Nonylphenol Repr. 2, H361; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	5 – 9%
CAS: 90-72-2	Aminophenol Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312	5 – 9%
CAS: 112-24-3	triethylenetetramine Skin Corr. 1B, H314; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 1%
CAS: 112-57-2	Epoxy curing agent Skin Corr. 1B, H314; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 1%

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 2)

## 4 First-aid measures

### - Description of first aid measures

#### - General information:

Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.

#### - After inhalation:

Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.  
Supply fresh air; consult doctor in case of complaints.

#### - 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:

Immediately call a doctor.  
Drink copious amounts of water and provide fresh air. Immediately call a doctor.

#### - 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.  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

#### - For safety reasons unsuitable extinguishing agents: Water

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

No further relevant information available.

### - Advice for firefighters

#### - Protective equipment:

Mouth respiratory protective device.  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

## 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Wear protective clothing.

### - Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

### - Methods and material for containment and cleaning up:

Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents  
Dispose of the collected material according to regulations.

### - 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

Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.

#### - Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 3)

**- 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:** Keep receptacle tightly sealed.

- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

**- Control parameters**

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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

<b>CAS: 100-51-6 Benzyl alcohol</b>	
WEEL	Long-term value: 10 ppm
<b>CAS: 112-24-3 triethylenetetramine</b>	
WEEL	Long-term value: 6 mg/m <sup>3</sup> , 1 ppm Skin
<b>CAS: 112-57-2 Epoxy curing agent</b>	
WEEL	Long-term value: 5 mg/m <sup>3</sup> Skin; DSEN

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

**- Exposure controls**

**- Personal protective equipment:**

**- General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

**- Breathing equipment:**

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

**- Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

**- 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.

- **As protection from splashes gloves made of the following materials are suitable:** Nitrile rubber, NBR

**- Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

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

**- General Information**

**- Appearance:**

**- Form:**

Viscous

**- Color:**

Light yellow

**- Odor:**

Amine-like

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 4)

- <b>Odor threshold:</b>	Not determined.
- <b>pH-value:</b>	Not determined.
- <b>Change in condition</b>	
- <b>Melting point/Melting range:</b>	Undetermined.
- <b>Boiling point/Boiling range:</b>	≥ 150 °C (≥ 302 °F)
- <b>Flash point:</b>	97 °C (206.6 °F)
- <b>Flammability (solid, gaseous):</b>	Not applicable.
- <b>Decomposition temperature:</b>	Not determined.
- <b>Auto igniting:</b>	Product is not selfigniting.
- <b>Danger of explosion:</b>	Product does not present an explosion hazard.
- <b>Explosion limits:</b>	
- <b>Lower:</b>	Not determined.
- <b>Upper:</b>	Not determined.
- <b>Vapor pressure at 20 °C (68 °F):</b>	≤ 0.1 hPa (≤ 0.1 mm Hg)
- <b>Density at 20 °C (68 °F):</b>	~ 1.04137 g/cm <sup>3</sup> (~ 8.69023 lbs/gal)
- <b>Relative density</b>	Not determined.
- <b>Vapor density</b>	Not determined.
- <b>Evaporation rate</b>	Not determined.
- <b>Solubility in / Miscibility with</b>	
- <b>Water:</b>	Not miscible or difficult to mix.
- <b>Partition coefficient (n-octanol/water):</b>	Not determined.
- <b>Viscosity:</b>	
- <b>Dynamic:</b>	Not determined.
- <b>Kinematic:</b>	Not determined.
- <b>Solvent content:</b>	
- <b>Organic solvents:</b>	10.8 %
- <b>VOC content:</b>	10.80 %
	~ 112.5 g/l / ~ 0.94 lb/gal
- <b>Solids content:</b>	1.3 %
- <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**

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

#### ATE (Acute Toxicity Estimate)

Oral	LD50	2,568 mg/kg (rat)
Dermal	LD50	3,100 mg/kg
Inhalative	LC50/4 h	3.63 mg/l

#### Curing agent

Oral	LD50	4,310 mg/kg (rat)
Dermal	LD50	2,510 mg/kg (rabbit)

#### Curing agent

Oral	LD50	1,080 mg/kg (rat)
------	------	-------------------

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 5)

Dermal	LD50	1,090 mg/kg (rabbit)
Inhalative	LC50/4 h	0.5 mg/l (ATE)
<b>CAS: 100-51-6 Benzyl alcohol</b>		
Oral	LD50	1,230 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)
<b>CAS: 84852-15-3 Nonylphenol</b>		
Oral	LD50	1,412 mg/kg (rat)
<b>CAS: 90-72-2 Aminophenol</b>		
Oral	LD50	1,200 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)
<b>CAS: 112-24-3 triethylenetetramine</b>		
Oral	LD50	2,500 mg/kg (rat)
Dermal	LD50	805 mg/kg (rabbit)
<b>CAS: 112-57-2 Epoxy curing agent</b>		
Oral	LD50	2,140 mg/kg (rat)
Dermal	LD50	> 660 mg/kg (rabbit)

**- Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

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

**- Additional toxicological information:**

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

Harmful

Corrosive

Irritant

Very toxic

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**- 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 further relevant information available.

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

**- Ecotoxicological effects:**

- **Remark:** Toxic for fish

**- Additional ecological information:****- General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 6)

## 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>	
<b>- DOT, IMDG, IATA</b>	UN1760
<b>- UN proper shipping name</b>	
<b>- DOT</b>	Corrosive liquids, n.o.s. (Diethylenetriamine, 4-nonyl-, branched)
<b>- IMDG</b>	CORROSIVE LIQUID, N.O.S. (DIETHYLENETRIAMINE, 4-nonyl-, branched), MARINE POLLUTANT
<b>- IATA</b>	CORROSIVE LIQUID, N.O.S. (DIETHYLENETRIAMINE, 4-nonyl-, branched)
<b>- Transport hazard class(es)</b>	
<b>- DOT</b>	
	
<b>- Class</b>	8 Corrosive substances
<b>- Label</b>	8
<b>- IMDG</b>	
 	
<b>- Class</b>	8 Corrosive substances
<b>- Label</b>	8
<b>- IATA</b>	
	
<b>- Class</b>	8 Corrosive substances
<b>- Label</b>	8
<b>- Packing group</b>	
<b>- DOT, IMDG, IATA</b>	II
<b>- Environmental hazards:</b>	Product contains environmentally hazardous substances: 4-nonyl-, branched
<b>- Marine pollutant:</b>	Yes Symbol (fish and tree)
<b>- Special precautions for user</b>	Warning: Corrosive substances
<b>- Danger code (Kemler):</b>	88
<b>- EMS Number:</b>	F-A,S-B
<b>- Stowage Category</b>	B
<b>- Stowage Code</b>	SW2 Clear of living quarters.
<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>- Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
<b>- IMDG</b>	
<b>- Limited quantities (LQ)</b>	0

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

Trade name: Vibra-TITE® Epoxy

(Contd. of page 7)

<b>- Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
<b>- UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (DIETHYLENETRIAMINE, 4-NONYL-, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS

## \*15 Regulatory information

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

<b>- Section 355 (extremely hazardous substances):</b>
None of the ingredients is listed.

<b>- Section 313 (Specific toxic chemical listings):</b>
CAS: 84852-15-3   Nonylphenol

<b>- TSCA (Toxic Substances Control Act):</b>	
Curing agent	*
Fatty Acids, C18-unsatd, dimers, polymers with bisphenol A, epichlorohydrin, tall-oil fatty acids, tetraethylenepentamine and TETA	ACTIVE
Curing agent	ACTIVE
Benzyl alcohol	ACTIVE
Nonylphenol	ACTIVE
Aminophenol	ACTIVE
Silicon dioxide, amorphous	ACTIVE
Bis (dimethylaminomethyl) phenol	*
triethylenetetramine	ACTIVE
Epoxy curing agent	ACTIVE

<b>- Hazardous Air Pollutants</b>	
None of the ingredients is listed.	

**- Proposition 65**

<b>- Chemicals known to cause cancer:</b>	
None of the ingredients is listed.	

<b>- Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients is listed.	

<b>- Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	

<b>- Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	

**- Carcinogenic categories**

<b>- EPA (Environmental Protection Agency)</b>	
None of the ingredients is listed.	

<b>- TLV (Threshold Limit Value established by ACGIH)</b>	
None of the ingredients is listed.	

<b>- NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
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 SDS:** ND Industries, Inc. - Safety, Health and Environmental Affaires

- Contact:** Safety, Health and Environmental Affaires

**- Date of preparation / last revision** 04/30/2019 / 27

**- 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

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

(Contd. on page 9)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/30/2019

Reviewed on 04/30/2019

**Trade name:** Vibra-TITE® Epoxy

(Contd. of page 8)

HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 2: Acute toxicity – Category 2  
Acute Tox. 3: Acute toxicity – Category 3  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Skin Corr. 1C: Skin corrosion/irritation – Category 1C  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Skin Sens. 1: Skin sensitisation – Category 1  
Repr. 2: Reproductive toxicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

- **Disclaimer**

The information set forth is based on information that ND Industries, Incorporated believes to be accurate. No warranty, expressed or implied, is intended. The information is provided solely for your information and consideration and ND Industries Inc. assumes no legal responsibility for use or reliance thereon. In the event of a discrepancy between the information on the non-English document and its English counterpart, the English version shall supersede.

®ND and ND Industries, Inc. are registered trademarks of ND Industries Incorporated,  
®Vibra-TITE is a registered trademark of ND Industries, Inc.