

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

Printing date 03/06/2019

Reviewed on 03/05/2019

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

- **Trade name:** Vibra-TITE® Structural Adhesive
- **Synonyms:** 226 No-Mix Structural Acrylic
- **Part number:** VT226
- **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**

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.  
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
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 GHS07 GHS08

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

Acrylic Esters  
acrylic acid  
dimethylbenzyl hydroperoxide  
2-hydroxyethyl methacrylate  
2'-phenylacetohydrazide

**- Hazard statements**

H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.

**- Precautionary statements**

P201 Obtain special instructions before use.

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P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash face, hands and any exposed skin thoroughly after handling.
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.
P302+P352	If on skin: Wash with plenty of water.
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).
P314	Get medical advice/attention 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.
P363	Wash contaminated clothing before reuse.
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

**- Chemical characterization: Mixtures**

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

**- Dangerous components:**

	Urethane acrylate Oligomer Skin Irrit. 2, H315; Eye Irrit. 2B, H320	30 – 39%
CAS: 5888-33-5	Acrylic Esters Skin Sens. 1B, H317	30 – 39%
CAS: 868-77-9	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	20 – 29%
CAS: 9004-36-8	Cellulose Acetate Butyrate Combustible Dust	5 – 9%
CAS: 79-10-7	acrylic acid Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	1 – 4%
CAS: 80-15-9	dimethylbenzyl hydroperoxide Self-react. F, H242; Org. Perox. E, H242; Acute Tox. 3, H311; STOT RE 2, H373; Asp. Tox. 1, H304; Eye Dam. 1, H318; Acute Tox. 4, H302; STOT SE 3, H335; Flam. Liq. 4, H227	1 – 4%
CAS: 114-83-0	2'-phenylacetohydrazide Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	≤ 1%
CAS: 98-82-8	cumene Flam. Liq. 3, H226; Carc. 2, H351; Asp. Tox. 1, H304; Acute Tox. 4, H302; STOT SE 3, H335	≤ 1%

## 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.

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- **After eye contact:** Rinse opened eye for several minutes under running water. Then 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.  
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:**  
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:**  
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.  
Prevent formation of aerosols.
  - **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **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.

### CAS: 79-10-7 acrylic acid

REL	Long-term value: 6 mg/m <sup>3</sup> , 2 ppm Skin
TLV	Long-term value: 5.9 mg/m <sup>3</sup> , 2 ppm Skin

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<b>CAS: 80-15-9 dimethylbenzyl hydroperoxide</b>	
WEEL	Long-term value: 6 mg/m <sup>3</sup> , 1 ppm Skin
<b>CAS: 98-82-8 cumene</b>	
PEL	Long-term value: 245 mg/m <sup>3</sup> , 50 ppm Skin
REL	Long-term value: 245 mg/m <sup>3</sup> , 50 ppm Skin
TLV	Long-term value: (246) NIC-0.5 mg/m <sup>3</sup> , (50) NIC-0.1 ppm NIC-A3

- **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 skin.
- 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.

##### - 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:** Dark brown
- **Odor:** Characteristic
- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

##### - Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** ≥ 213 °C (≥ 415.4 °F)

- **Flash point:** 97 °C (206.6 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

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

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<b>- Explosion limits:</b>	
- Lower:	Not determined.
- Upper:	Not determined.
- Vapor pressure at 68 °C (154.4 °F):	≤ 1.3 hPa (≤ 1 mm Hg)
- Density at 20 °C (68 °F):	~ 1.1 g/cm <sup>3</sup> (~ 9.1795 lbs/gal)
- Relative density	Not determined.
- Vapor density	Not determined.
- Evaporation rate	Not determined.
<b>- Solubility in / Miscibility with</b>	
- Water:	Not miscible or difficult to mix.
<b>- Partition coefficient (n-octanol/water):</b> Not determined.	
<b>- Viscosity:</b>	
- Dynamic at 20 °C (68 °F):	17,000 mPas
- Kinematic:	Not determined.
<b>- Solvent content:</b>	
- Organic solvents:	0.6 %
- Water:	1.1 %
- VOC content:	0.63 % ~ 7.0 g/l / ~ 0.06 lb/gal
- Solids content:	9.2 %
- Other information	No further relevant information available.

## 10 Stability and reactivity

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

## \*11 Toxicological information

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

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

#### ATE (Acute Toxicity Estimate)

Oral	LD50	5,302 mg/kg (rat)
Dermal	LD50	> 4,234 mg/kg
Inhalative	LC50/4 h	309 mg/l

#### CAS: 868-77-9 2-hydroxyethyl methacrylate

Oral	LD50	5,050 mg/kg (rat)
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#### CAS: 9004-36-8 Cellulose Acetate Butyrate

Oral	LD50	> 6,400 mg/kg (rabbit)
Dermal	LD50	> 1,000 mg/kg (rabbit)

#### CAS: 79-10-7 acrylic acid

Oral	LD50	250 mg/kg (rat)
Dermal	LD50	280 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

#### CAS: 80-15-9 dimethylbenzyl hydroperoxide

Oral	LD50	382 mg/kg (rat)
Dermal	LD50	500 mg/kg (rat)
Inhalative	LC50/4 h	220 mg/l (rat)

#### CAS: 114-83-0 2'-phenylacetohydrazide

Oral	LD50	270 mg/kg (mouse)
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**CAS: 98-82-8 cumene**

Oral	LD50	1,400 mg/kg (rat)
Dermal	LD50	12,300 mg/kg (rabbit)
Inhalative	LC50/4 h	24.7 mg/l (mouse)

**- Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.

**- 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)**

CAS: 79-10-7	acrylic acid	3
CAS: 98-82-8	cumene	2B

**- NTP (National Toxicology Program)**

CAS: 98-82-8	cumene	R
CAS: 130-15-4	1,4-naphthoquinone	R

**- 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:** Very toxic for fish

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

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Very 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****- UN-Number**

- **DOT, IMDG, IATA** UN3082

**- UN proper shipping name**

- **DOT** Environmentally hazardous substance, liquid, n.o.s. (Isobornyl Acrylate)

- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl Acrylate), MARINE POLLUTANT

- **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl Acrylate)

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<b>- Transport hazard class(es)</b>	
<b>- DOT, IMDG, IATA</b>	
	
<b>- Class</b>	9 Miscellaneous dangerous substances and articles
<b>- Label</b>	9
<b>- Packing group</b>	
<b>- DOT, IMDG, IATA</b>	III
<b>- Environmental hazards:</b>	
<b>- Marine pollutant:</b>	Product contains environmentally hazardous substances: Isobornyl Acrylate No Yes (DOT) Symbol (fish and tree)
<b>- Special marking (IATA):</b>	Symbol (fish and tree)
<b>- Special precautions for user</b>	
<b>- Danger code (Kemler):</b>	Warning: Miscellaneous dangerous substances and articles 90
<b>- EMS Number:</b>	F-A,S-F
<b>- Stowage Category</b>	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>- Quantity limitations</b>	On passenger aircraft/rail: No limit On cargo aircraft only: No limit
<b>- Remarks:</b>	Special marking with the symbol (fish and tree).
<b>- IMDG</b>	
<b>- Limited quantities (LQ)</b>	5L
<b>- Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>- UN "Model Regulation":</b>	
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOBORNYL ACRYLATE), 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.

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

CAS: 79-10-7	acrylic acid
CAS: 80-15-9	dimethylbenzyl hydroperoxide
CAS: 98-82-8	cumene

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

Acrylic Esters
2-hydroxyethyl methacrylate
Cellulose Acetate Butyrate
acrylic acid
Saccharin
dimethylbenzyl hydroperoxide
propane-1,2-diol
2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate
2'-phenylacetohydrazide
cumene
2-Phenyl-2-propanol

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tetrasodium ethylenediaminetetraacetate		
1,4-naphthoquinone		
1-hydroxyethane-1,1-diybis(phosphonic acid)		
phosphorous acid		
Deionized water		
<b>- TSCA new (21st Century Act): (Substances not listed)</b>		
	Urethane acrylate Oligomer	
CAS: 114-83-0	2'-phenylacetohydrazide	
<b>- Hazardous Air Pollutants</b>		
CAS: 79-10-7	acrylic acid	
CAS: 98-82-8	cumene	
CAS: 130-15-4	1,4-naphthoquinone	
<b>- Proposition 65</b>		
<b>- Chemicals known to cause cancer:</b>		
CAS: 98-82-8	cumene	
<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>		
CAS: 98-82-8	cumene	D, CBD
<b>- TLV (Threshold Limit Value established by ACGIH)</b>		
CAS: 79-10-7	acrylic acid	A4
<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 Affairs

**- Contact:** Safety, Health and Environmental Affairs

**- Date of preparation / last revision** 03/06/2019 / 11

**- 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)  
 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  
 Flam. Liq. 3: Flammable liquids – Category 3  
 Flam. Liq. 4: Flammable liquids – Category 4  
 Self-react. F: Self-reactive substances and mixtures – Type E/F  
 Org. Perox. E: Organic peroxides – Type E/F  
 Acute Tox. 4: Acute toxicity – Category 4  
 Acute Tox. 3: Acute toxicity – Category 3  
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
 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  
 Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B  
 Skin Sens. 1: Skin sensitisation – Category 1  
 Skin Sens. 1B: Skin sensitisation – Category 1B

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Carc. 2: Carcinogenicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Asp. Tox. 1: Aspiration hazard – Category 1

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

- **Disclaimer**

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