

**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® UV Adhesive
- **Synonyms:** 211 Light Cure Adhesive
- **Part number:** VT211
- **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

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



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  
Silane  
Phosphine oxide  
acrylic acid  
2-hydroxyethyl methacrylate

**- Hazard statements**

H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H361 Suspected of damaging fertility or the unborn child.

**- Precautionary statements**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 Wash face, hands and any exposed skin thoroughly after handling.

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|                |  |
|----------------|--|
| 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).  |
| 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)**

|            |          |                |
|------------|----------|----------------|
| 3          | 1        | 0              |
| Health = 3 | Fire = 1 | Reactivity = 0 |

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

|            |   |                |
|------------|---|----------------|
| HEALTH     | 3 | Health = *3    |
| 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

**- Chemical characterization: Mixtures**

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

**- Dangerous components:**

|                 |   |          |
|-----------------|---|----------|
| CAS: 5888-33-5  | Acrylic Esters<br>Skin Sens. 1B, H317   | 60 – 69% |
|                 | Urethane acrylate Oligomer<br>Skin Irrit. 2, H315; Eye Irrit. 2B, H320  | 10 – 19% |
| CAS: 7534-94-3  | Isobornyl Methacrylate<br>Skin Irrit. 2, H315; Eye Irrit. 2A, H319  | 5 – 9%   |
| CAS: 868-77-9   | 2-hydroxyethyl methacrylate<br>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317                         | 4.46%    |
| CAS: 2530-83-8  | Silane<br>Eye Dam. 1, H318  | 1 – 4%   |
| CAS: 75980-60-8 | Phosphine oxide<br>Repr. 2, H361; Skin Sens. 1, H317  | 1 – 4%   |
| CAS: 79-10-7    | acrylic acid<br>Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332 | 1 – 4%   |
| CAS: 7473-98-5  | Photoinitiator<br>Acute Tox. 4, H302  | 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.

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- **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.  
Use fire fighting measures that suit the environment.
  - **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 constituent is the only constituent of the product which has 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<br>Skin   |
| TLV | Long-term value: 5.9 mg/m <sup>3</sup> , 2 ppm<br>Skin |

- **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.

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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.

**- 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:**

Liquid

**- Color:**

Clear

**- Odor:**

Characteristic

**- Odor threshold:**

Not determined.

**- pH-value:**

Not determined.

**- Change in condition****- Melting point/Melting range:**

Undetermined.

**- Boiling point/Boiling range:**

≥ 275 °C (≥ 527 °F)

**- Flash point:**

101 °C (213.8 °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.

**- Explosion limits:****- Lower:**

Not determined.

**- Upper:**

Not determined.

**- Vapor pressure:**

Not determined.

**- Density at 20 °C (68 °F):**~ 1.01255 g/cm<sup>3</sup> (~ 8.44973 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 at 20 °C (68 °F):**

150 mPas

**- Kinematic:**

Not determined.

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|                            |  |
|----------------------------|--|
| - <b>Solvent content:</b>  |  |
| - <b>VOC content:</b>      | 0.00 %<br>0.0 g/l / 0.00 lb/gal            |
| - <b>Solids content:</b>   | 1.9 %                                      |
| - <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     | 14,387 mg/kg (rat)    |
| Dermal     | LD50     | 18,065 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 710 mg/l              |

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

|      |      |                   |
|------|------|-------------------|
| Oral | LD50 | 5,050 mg/kg (rat) |
|------|------|-------------------|

**CAS: 75980-60-8 Phosphine oxide**

|      |      |                     |
|------|------|---------------------|
| Oral | LD50 | > 5,000 mg/kg (rat) |
|------|------|---------------------|

**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: 7473-98-5 Photoinitiator**

|      |      |                   |
|------|------|-------------------|
| Oral | LD50 | 1,694 mg/kg (rat) |
|------|------|-------------------|

- **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)**

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- **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:** Very toxic for fish

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**- 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

|  |  |
|--|--|
| <b>- UN-Number</b><br><b>- DOT, IMDG, IATA</b>   | UN3082   |
| <b>- UN proper shipping name</b><br><b>- DOT</b><br><br><b>- IMDG</b><br><br><b>- IATA</b>   | Environmentally hazardous substance, liquid, n.o.s. (Isobornyl Acrylate)<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl Acrylate, diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide), MARINE POLLUTANT<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Isobornyl Acrylate) |
| <b>- Transport hazard class(es)</b><br><b>- DOT, IMDG, IATA</b><br><br><br><br><b>- Class</b><br><b>- Label</b> | 9 Miscellaneous dangerous substances and articles<br>9   |
| <b>- Packing group</b><br><b>- DOT, IMDG, IATA</b>   | III  |
| <b>- Environmental hazards:</b><br><br><b>- Marine pollutant:</b><br><br><b>- Special marking (IATA):</b>  | Product contains environmentally hazardous substances: Isobornyl Acrylate<br>No<br>Yes (DOT)<br>Symbol (fish and tree)<br>Symbol (fish and tree)   |
| <b>- Special precautions for user</b><br><b>- Danger code (Kemler):</b><br><b>- EMS Number:</b><br><b>- Stowage Category</b>   | Warning: Miscellaneous dangerous substances and articles<br>90<br>F-A,S-F<br>A   |
| <b>- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>   | Not applicable.  |
| <b>- Transport/Additional information:</b><br><br><b>- DOT</b><br><b>- Quantity limitations</b><br><br><b>- Remarks:</b><br><br><b>- IMDG</b><br><b>- Limited quantities (LQ)</b>                  | <br><br>On passenger aircraft/rail: No limit<br>On cargo aircraft only: No limit<br>Special marking with the symbol (fish and tree).<br><br>5L   |

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|                                   |  |
|-----------------------------------|--|
| <b>- Excepted quantities (EQ)</b> | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>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):**

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

Acrylic Esters

Isobornyl Methacrylate

2-hydroxyethyl methacrylate

Silane

Phosphine oxide

acrylic acid

Photoinitiator

**- TSCA new (21st Century Act): (Substances not listed)**

Urethane acrylate Oligomer

**- Hazardous Air Pollutants**

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**- 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)**

None of the ingredients is listed.

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

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A4

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

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 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)

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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  
Acute Tox. 4: Acute toxicity – Category 4  
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  
Repr. 2: Reproductive toxicity – Category 2

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

- **Disclaimer**

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