

**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 Adhesives
- **Synonyms:** 297 Acrylic UV - Visible w/Fluorescence Light Cure
- **Part number:** VT297
- **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 H301 Toxic if swallowed.



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

Acute Tox. 4 H312 Harmful in contact with skin.

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**

GHS05 GHS06 GHS07 GHS08

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

Urethane triacrylate oligomer  
N,N-dimethylacrylamide  
Acrylic Esters  
Tetrahydrofurfuryl acrylate  
Tripropylene diacrylate  
Di(ethylene glycol) ethyl ether acrylate  
Phosphine oxide

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**- Hazard statements**

- H301 Toxic if swallowed.  
 H312 Harmful in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H361 Suspected of damaging fertility or the unborn child.  
 H335 May cause respiratory irritation.

**- 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 protective gloves / protective clothing.  
 P280 Wear eye protection / face protection.  
 P301+P310 If swallowed: Immediately call a poison center/doctor.  
 P321 Specific treatment (see on this label).  
 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.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P312 Call a poison center/doctor if you feel unwell.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 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

**- Chemical characterization: Mixtures**

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

**- Dangerous components:**

	Aliphatic urethane acrylate oligomer STOT SE 3, H335	10 – 19%
CAS: 5888-33-5	Acrylic Esters Skin Sens. 1B, H317	10 – 19%
	Urethane triacrylate oligomer Acute Tox. 3, H301; STOT SE 3, H335; Eye Irrit. 2B, H320	10 – 19%
CAS: 2680-03-7	N,N-dimethylacrylamide Acute Tox. 3, H301; Acute Tox. 3, H311; Eye Dam. 1, H318; Flam. Liq. 4, H227	10 – 19%
	Tetrahydrofurfuryl acrylate Acute Tox. 3, H301; Skin Corr. 1B, H314; Eye Irrit. 2A, H319; STOT SE 3, H335; Flam. Liq. 4, H227	4.54%
	Tripropylene diacrylate Skin Irrit. 2, H315; Skin Sens. 1B, H317; STOT SE 3, H335	4.54%
CAS: 7328-17-8	Di(ethylene glycol) ethyl ether acrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	4.54%

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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	4.54%
CAS: 947-19-3	Photoinitiator Combustible Dust	1 – 4%
CAS: 75980-60-8	Phosphine oxide Repr. 2, H361; Skin Sens. 1, H317	1 – 4%
CAS: 2530-83-8	Silane Eye Dam. 1, H318	1 – 4%
CAS: 7473-98-5	Photoinitiator Acute Tox. 4, H302	1 – 4%

## 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.

#### - 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. 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.

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:

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.

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## 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  
Skin

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

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## 9 Physical and chemical properties

<b>- Information on basic physical and chemical properties</b>	
<b>- General Information</b>	
<b>- Appearance:</b>	
<b>- Form:</b>	Liquid
<b>- Color:</b>	Clear
<b>- Odor:</b>	Characteristic
<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>	≥ 81 °C (≥ 177.8 °F)
<b>- Flash point:</b>	100 °C (212 °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:</b>	
<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>	320 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>	5.9 %
<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	234 mg/kg
Dermal	LD50	1,302 mg/kg
Inhalative	LC50/4 h	242 mg/l

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<b>Urethane triacrylate oligomer</b>		
Oral	LD50	100 mg/kg (ATE)
<b>CAS: 2680-03-7 N,N-dimethylacrylamide</b>		
Oral	LD50	100 mg/kg (ATE)
Dermal	LD50	300 mg/kg (ATE)
<b>Tetrahydrofurfuryl acrylate</b>		
Oral	LD50	100 mg/kg (ATE)
<b>CAS: 79-10-7 acrylic acid</b>		
Oral	LD50	250 mg/kg (rat)
Dermal	LD50	280 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)
<b>CAS: 75980-60-8 Phosphine oxide</b>		
Oral	LD50	> 5,000 mg/kg (rat)
<b>CAS: 7473-98-5 Photoinitiator</b>		
Oral	LD50	1,694 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** 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

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)**

CAS: 79-10-7 acrylic acid

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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

- **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.  
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.

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**- Uncleaned packagings:****- Recommendation:** Disposal must be made according to official regulations.**\*14 Transport information**

- <b>UN-Number</b>	
- <b>DOT</b>	not regulated
- <b>IMDG, IATA</b>	UN3082
- <b>UN proper shipping name</b>	
- <b>DOT</b>	not regulated
- <b>IMDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetrahydrofurfuryl acrylate, ACRYLIC ACID, STABILIZED), MARINE POLLUTANT
- <b>IATA</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetrahydrofurfuryl acrylate)
- <b>Transport hazard class(es)</b>	
- <b>DOT</b>	
- <b>Class</b>	not regulated
- <b>Label</b>	-
- <b>IMDG, IATA</b>	
	
- <b>Class</b>	9 Miscellaneous dangerous substances and articles
- <b>Label</b>	9
- <b>Packing group</b>	
- <b>DOT</b>	not regulated
- <b>IMDG, IATA</b>	III
- <b>Environmental hazards:</b>	Product contains environmentally hazardous substances: Tripropylene diacrylate
- <b>Marine pollutant:</b>	Yes
- <b>Special marking (IATA):</b>	Symbol (fish and tree)
- <b>Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles
- <b>Danger code (Kemler):</b>	80
- <b>EMS Number:</b>	F-A,S-F
- <b>Segregation groups</b>	Acids
- <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>IMDG</b>	
- <b>Limited quantities (LQ)</b>	1L
- <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
- <b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TETRAHYDROFURFURYL 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

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<b>- TSCA (Toxic Substances Control Act):</b>	
Acrylic Esters	
N,N-dimethylacrylamide	
Di(ethylene glycol) ethyl ether acrylate	
acrylic acid	
Photoinitiator	
Phosphine oxide	
Silane	
Photoinitiator	
2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole)	
<b>- TSCA new (21st Century Act): (Substances not listed)</b>	
Aliphatic urethane acrylate oligomer	
Urethane triacrylate oligomer	
Tetrahydrofurfuryl acrylate	
Tripropylene diacrylate	
<b>- Hazardous Air Pollutants</b>	
CAS: 79-10-7 acrylic acid	
<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>	
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 / 10

- **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

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

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Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
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  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

- **Disclaimer**

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