

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/01/2016

Reviewed on 01/29/2016

1 Identification**- Product identifier****- Trade name:** Vibra-TITE® UV Adhesives**- Synonyms:** 255 Light Cure Adhesive**- Part number:** VT255**- 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

Skin Corr. 1C 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.

STOT SE 3 H335 May cause respiratory irritation.

Flam. Liq. 4 H227 Combustible liquid.

- 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:**Urethane acrylate oligomer
Tetrahydrofurfuryl acrylate
Phosphine oxide
Epoxy Diacrylate**- Hazard statements**H227 Combustible liquid.
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**P210 Keep away from flames and hot surfaces. – No smoking.
P260 Do not breathe dusts or mists.

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P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280	Wear protective gloves / eye protection / face protection.
P280	Wear protective gloves.
P280	Wear eye protection / face protection.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
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:

	Urethane acrylate oligomer Skin Sens. 1B, H317; Eye Irrit. 2B, H320	40-50%
	Epoxy Diacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1B, H317	10-20%
616-45-5	2-pyrrolidone Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	5-10%
84170-74-1	Propoxylated neopentyl glycol diacrylate esters Skin Irrit. 2, H315; Skin Sens. 1B, H317; STOT SE 3, H335; Eye Irrit. 2B, H320	5-10%
2399-48-6	Tetrahydrofurfuryl acrylate Skin Corr. 1C, H314; Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335; Flam. Liq. 4, H227	5-10%
15625-89-5	Acrylic polymer Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	1-5%
42978-66-5	(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335; Flam. Liq. 4, H227	1-5%
7473-98-5	Photoinitiator Acute Tox. 4, H302	1-5%
75980-60-8	Phosphine oxide Repr. 2, H361	1-5%

4 First-aid measures

- Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.

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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:** 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:**
CO₂, 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**
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.
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:** Protect from heat.
- **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.
Protect from heat and direct sunlight.
 - **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:**

15625-89-5 Acrylic polymer

WEEL	Long-term value: 1 mg/m ³
	Skin

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

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- 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

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: 225 °C (437 °F)

- Flash point: 93 °C (199 °F)

- Flammability (solid, gaseous): Not applicable.

- Ignition temperature:

- Decomposition temperature: Not determined.

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Not determined.

- Explosion limits:

- Lower: Not determined.
- Upper: Not determined.

- Vapor pressure: Not determined.

- Density at 20 °C (68 °F): 1.01 g/cm³ (8.428 lbs/gal)

- Relative density: Not determined.
- Vapor density: Not determined.
- Evaporation rate: Not determined.

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- Solubility in / Miscibility with	
- Water:	Not miscible or difficult to mix.
- Partition coefficient (n-octanol/water):	Not determined.
- Viscosity:	
- Dynamic:	Not determined.
- Kinematic:	Not determined.
- Solvent content:	
- Organic solvents:	3.0 %
- VOC content:	3.0 % 30.3 g/l / 0.25 lb/gl
- Solids content:	34.0 %
- 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:
616-45-5 2-pyrrolidone
Oral LD50 328 mg/kg (rat)
2399-48-6 Tetrahydrofurfuryl acrylate
Oral LD50 500 mg/kg (ATE)
42978-66-5 (1-methyl-1,2-ethanediy)bis[oxy(methyl-2,1-ethanediy)] diacrylate
Oral LD50 5000 mg/kg (rat)
7473-98-5 Photoinitiator
Oral LD50 1694 mg/kg (rat)
75980-60-8 Phosphine oxide
Oral LD50 >5000 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:

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)
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.

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- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Harmful to 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.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Harmful to 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

<ul style="list-style-type: none"> - UN-Number <li style="padding-left: 20px;">- DOT, IMDG, IATA 	UN1760
<ul style="list-style-type: none"> - UN proper shipping name <li style="padding-left: 20px;">- DOT, IATA <li style="padding-left: 20px;">- IMDG 	Corrosive liquids, n.o.s. (Tetrahydrofurfuryl acrylate) CORROSIVE LIQUID, N.O.S. (Tetrahydrofurfuryl acrylate)
<ul style="list-style-type: none"> - Transport hazard class(es) <li style="padding-left: 20px;">- DOT 	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> - Class - Label
	8 Corrosive substances 8
<ul style="list-style-type: none"> - IMDG, IATA 	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> - Class - Label
	8 Corrosive substances 8
<ul style="list-style-type: none"> - Packing group <li style="padding-left: 20px;">- DOT, IMDG, IATA 	II
<ul style="list-style-type: none"> - Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> - Special precautions for user <li style="padding-left: 20px;">- Danger code (Kemler): <li style="padding-left: 20px;">- EMS Number: <li style="padding-left: 20px;">- Stowage Category <li style="padding-left: 20px;">- Stowage Code 	Warning: Corrosive substances 80 F-A,S-B B SW2 Clear of living quarters.
<ul style="list-style-type: none"> - Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> - Transport/Additional information: <li style="padding-left: 20px;">- DOT <li style="padding-left: 40px;">- Quantity limitations 	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L

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<ul style="list-style-type: none"> - IMDG - Limited quantities (LQ) - Excepted quantities (EQ) 	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> - UN "Model Regulation": 	UN 1760 CORROSIVE LIQUIDS, N.O.S. (TETRAHYDROFURFURYL ACRYLATE), 8, II

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):**

2-pyrrolidone
 Propoxylated neopentyl glycol diacrylate esters
 Tetrahydrofurfuryl acrylate
 Acrylic polymer
 (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate
 Photoinitiator
 Phosphine oxide

- **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)**

None of the ingredients is listed.

- **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 Affaires

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

- **Date of preparation / last revision** 02/01/2016 / 1

- **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

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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. 4: Flammable liquids, Hazard Category 4
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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

- **Disclaimer**

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