

Safety Data Sheet
according to HPR, Schedule 1

Printing date 01/29/2024

Reviewed on 01/29/2024

1 Identification**- Product identifier**

- **Trade name:** Vibra-TITE® Structural Adhesive
- **Synonyms:** 224 High Impact No-Mix Structural Adhesive
- **Part number:** VT224
- **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 identification**- Classification of the substance or mixture**

GHS05 Corrosion

Serious Eye Damage - Category 1 H318 Causes serious eye damage.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Skin Sensitizer - Category 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

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

2-hydroxyethyl methacrylate
acrylic acid
Methacrylic acid
methacrylic acid, monoester with propane-1,2-diol
2'-phenylacetohydrazide

- Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.

- Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P280 Wear protective gloves.
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.

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P310	Immediately call a poison center/doctor.
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.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/Information on ingredients

- Chemical characterization: Mixtures

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

- Dangerous components:

	Urethane acrylate Oligomer Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319	30 – 60% w/w
CAS: 7534-94-3	Isobornyl Methacrylate Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319	10 – 30% w/w
CAS: 868-77-9	2-hydroxyethyl methacrylate Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317	10 – 30% w/w
CAS: 27813-02-1	methacrylic acid, monoester with propane-1,2-diol Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317	1 – 5% w/w
CAS: 79-10-7	acrylic acid Flammable Liquids - Category 3, H226; Skin Corrosion - Category 1A, H314; Serious Eye Damage - Category 1, H318; Acute Toxicity (Oral) - Category 4, H302; Acute Toxicity (Dermal) - Category 4, H312; Acute Toxicity (Inhalation) - Category 4, H332	1 – 5% w/w
CAS: 614-45-9	tert-butyl perbenzoate Organic Peroxides – Type C, H242; Acute Toxicity (Oral) - Category 4, H302; Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319; Specific Target Organ Toxicity - Single Exposure - Category 3, H335	1 – 5% w/w
CAS: 79-41-4	Methacrylic acid Acute Toxicity (Dermal) – Category 3, H311; Skin Corrosion - Category 1A, H314; Serious Eye Damage - Category 1, H318; Acute Toxicity (Oral) - Category 4, H302; Acute Toxicity (Inhalation) - Category 4, H332; Specific Target Organ Toxicity - Single Exposure - Category 3, H335; Flammable Liquids - Category 4, H227	0.1 – 1% w/w
CAS: 114-83-0	2'-phenylacetohydrazide Acute Toxicity (Oral) - Category 4, H302; Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317; Specific Target Organ Toxicity - Single Exposure - Category 3, H335	0.1 – 1% w/w

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:

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

Ensure adequate ventilation

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Wear protective clothing.

- **Environmental precautions:** 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.

- **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 section 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

EL (Canada) TWA: 2 ppm
Skin; R

EV (Canada) TWA: 2 ppm

REL (USA) TWA: 6 mg/m³, 2 ppm
SkinTLV (USA) TWA: 2 ppm
Skin, A3

CAS: 79-41-4 Methacrylic acid

EL (Canada) TWA: 20 ppm

EV (Canada) TWA: 70 mg/m³, 20 ppmREL (USA) TWA: 70 mg/m³, 20 ppm
Skin

TLV (USA) TWA: 20 ppm

- **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

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- 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: Required use of safety glasses**- Body protection:** Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties**- General Information****- Appearance:****- Form:**

Viscous

- Color:

Clear

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

≥ 213 °C

- Flash point:

97 °C

- Flammability (solid, gaseous):

Not applicable.

- Decomposition temperature:

Not determined.

- Ignition temperature:

Product is not selfigniting.

- Danger of explosion:

Product does not present an explosion hazard.

- Explosion limits:**- Lower:**

Not determined.

- Upper:

Not determined.

- Vapor pressure at 68 °C:

≤ 1.3 hPa

- Density at 20 °C:~ 1.11 g/cm³**- 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:**

17,500 mPas

- Kinematic:

Not determined.

- Solvent content:**- Organic solvents:**

0.4 %

- Water:

0.1 %

- VOC content:

0.45 %

~ 4.9 g/l / ~ 0.04 lb/gal

- Solids content:

0.4 %

- 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.

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- **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	6,568 mg/kg
Dermal	LD50	7,650 mg/kg (rabbit)
Inhalative	LC50/4 h	268 mg/l

CAS: 868-77-9 2-hydroxyethyl methacrylate

Oral	LD50	5,050 mg/kg (rat)
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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: 614-45-9 tert-butyl perbenzoate

Oral	LD50	1,012 mg/kg (rat)
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CAS: 79-41-4 Methacrylic acid

Oral	LD50	1,332 mg/kg (mouse)
Dermal	LD50	500 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

CAS: 114-83-0 2'-phenylacetohydrazide

Oral	LD50	270 mg/kg (mouse)
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- **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)**

CAS: 79-10-7	acrylic acid	3
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- **NTP (National Toxicology Program)**

CAS: 130-15-4	1,4-naphthoquinone	R
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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.

- **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.

- **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**

- UN-Number - DOT/TDG, ADR, ADN, IMDG, IATA	not regulated
- UN proper shipping name - DOT/TDG, ADR, ADN, IMDG, IATA	not regulated
- Transport hazard class(es) - DOT/TDG, ADR, ADN, IMDG, IATA - Class	not regulated
- Packing group - DOT/TDG, ADR, IMDG, IATA	not regulated
- Environmental hazards: - Marine pollutant:	No
- Special precautions for user	Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
- UN "Model Regulation":	not regulated

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

No further relevant information available.

- Sara**- Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):

CAS: 79-10-7 | acrylic acid

- TSCA (Toxic Substances Control Act):

Urethane acrylate Oligomer	ACTIVE
Isobornyl Methacrylate	ACTIVE
2-hydroxyethyl methacrylate	ACTIVE
methacrylic acid, monoester with propane-1,2-diol	ACTIVE
acrylic acid	ACTIVE
tert-butyl perbenzoate	ACTIVE
Methacrylic acid	ACTIVE
Saccharin	ACTIVE
propane-1,2-diol	ACTIVE
2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate	ACTIVE
2'-phenylacetohydrazide	ACTIVE
Deionized water	ACTIVE
tetrasodium ethylenediaminetetraacetate	ACTIVE
1,4-naphthoquinone	ACTIVE

- Canadian substance listings:**- Canadian Domestic Substances List (DSL)**

	Urethane acrylate Oligomer
CAS: 7534-94-3	Isobornyl Methacrylate
CAS: 868-77-9	2-hydroxyethyl methacrylate
CAS: 27813-02-1	methacrylic acid, monoester with propane-1,2-diol
CAS: 79-10-7	acrylic acid
CAS: 614-45-9	tert-butyl perbenzoate
CAS: 79-41-4	Methacrylic acid
CAS: 128-44-9	Saccharin
CAS: 57-55-6	propane-1,2-diol

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CAS: 25852-47-5	2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate
CAS: 114-83-0	2'-phenylacetohydrazide
CAS: 7732-18-5	Deionized water
CAS: 64-02-8	tetrasodium ethylenediaminetetraacetate
CAS: 130-15-4	1,4-naphthoquinone
- Canadian Non-Domestic Substances List (NDSL)	
None of the ingredients is listed.	
- Canadian Ingredient Disclosure list (limit 0.1%)	
None of the ingredients is listed.	
- Canadian Ingredient Disclosure list (limit 1%)	
CAS: 868-77-9	2-hydroxyethyl methacrylate
CAS: 79-10-7	acrylic acid
CAS: 79-41-4	Methacrylic acid

- 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

- Classification System:

- HMIS-ratings (scale 0 - 4)

HEALTH	3	Health = *3
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- NFPA ratings (scale 0 - 4)

3	1	0	Health = 3
			Fire = 1
			Reactivity = 0

- Date of the latest revision of the safety data sheet 01/29/2024

- Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 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)
 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

- Disclaimer

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