

Product code	Description
VTPB500	Vibra-TITE® Methacrylate Adhesives PB500 Low Surface Energy Bonding Resin

Components:

VTPB500A	Vibra-TITE® Methacrylate Adhesives PB500 Low Surface Energy Bonding Resin - Part A
VTPB500B	Vibra-TITE® Methacrylate Adhesives PB500 Low Surface Energy Bonding Resin - Part B

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/16/2021

Reviewed on 09/15/2021

1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Methacrylate Adhesives
- **Synonyms:** PB500 Low Surface Energy Bonding Resin - Part A
- **Part number:** VTPB500A
- **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

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Repr. 1B H360 May damage fertility or the unborn child.

STOT RE 1 H372 Causes 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.

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:

maleic anhydride
tetrahydrofurfuryl methacrylate
2-ethylhexyl methacrylate
tetrahydro-2-furylmethanol
Monofunctional acid ester

- Hazard statements

H227 Combustible liquid.

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Trade name: Vibra-TITE® Methacrylate Adhesives

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H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H360 May damage fertility or the unborn child.
 H335 May cause respiratory irritation.
 H372 Causes damage to organs through prolonged or repeated exposure.

- Precautionary statements

P210 Keep away from flames and hot surfaces. – No smoking.
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 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 eye protection / face protection.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P304+P341 If inhaled: If breathing is difficult, 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.
 P310 Immediately call a poison center/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P321 Specific treatment (see on this label).
 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.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Additional information:

4 % of the mixture consists of component(s) of unknown toxicity.

- 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: 2455-24-5	tetrahydrofurfuryl methacrylate	50 – 59%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
CAS: 20882-04-6	Butanedioic acid	5 – 9%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
CAS: 688-84-6	2-ethylhexyl methacrylate	5 – 9%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335; Flam. Liq. 4, H227	
CAS: 69912-79-4	Desiccant	5 – 9%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
CAS: 108-31-6	maleic anhydride	1 – 4%
	Resp. Sens. 1, H334; STOT RE 1, H372; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1, H317	
	Monofunctional acid ester	≤ 1%
	Acute Tox. 3, H311; Skin Corr. 1C, H314; Eye Dam. 1, H318; Skin Sens. 1, H317	
CAS: 97-99-4	tetrahydro-2-furymethanol	≤ 1%
	Repr. 1B, H360; Acute Tox. 4, H302; Eye Irrit. 2A, H319; Flam. Liq. 4, H227	

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.

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Trade name: Vibra-TITE® Methacrylate Adhesives

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- 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, 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**
Ensure adequate ventilation
Keep away from ignition sources
Wear protective clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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:** 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 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: 108-31-6 maleic anhydride

PEL	Long-term value: 1 mg/m ³ , 0.25 ppm
REL	Long-term value: 1 mg/m ³ , 0.25 ppm
TLV	Long-term value: 0.01* mg/m ³ DSEN, RSEN;*inh. fraction + vapor, A4

CAS: 97-99-4 tetrahydro-2-furylmethanol

WEEL	Long-term value: 0.5 ppm
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- **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.

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Trade name: Vibra-TITE® Methacrylate Adhesives

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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.

- Body protection: Protective work clothing

9 Physical and chemical properties

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

Pasty

- Color:

According to product specification

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

≥ 59 – ≤ 62 °C (≥ 138.2 – ≤ 143.6 °F)

- Flash point:

≥ 92 °C (≥ 197.6 °F)

- Flammability (solid, gaseous):

Not applicable.

- 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):~ 1.11747 g/cm³ (~ 9.32529 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:**

Not determined.

- Kinematic:

Not determined.

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

0.2 %

- VOC content:

0.22 %

~ 2.4 g/l / ~ 0.02 lb/gal

- Solids content:

20.2 %

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Trade name: Vibra-TITE® Methacrylate Adhesives

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- **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	11,429 mg/kg (rat)
Dermal	LD50	30,000 mg/kg

CAS: 108-31-6 maleic anhydride

Oral	LD50	400 mg/kg (rat)
Dermal	LD50	2,620 mg/kg (rabbit)

Monofunctional acid ester

Dermal	LD50	300 mg/kg (ATE)
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CAS: 97-99-4 tetrahydro-2-furylmethanol

Oral	LD50	1,600 mg/kg (rat)
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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 inhalation.
- Sensitization possible through skin contact.

- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

- 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.

- 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.

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Printing date 09/16/2021

Reviewed on 09/15/2021

Trade name: Vibra-TITE® Methacrylate Adhesives

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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, ADN, IMDG, IATA	not regulated
- UN proper shipping name	
- DOT, ADN, IMDG, IATA	not regulated
- Transport hazard class(es)	
- DOT, ADN, IMDG, IATA	
- Class	not regulated
- Packing group	
- DOT, IMDG, IATA	not regulated
- Environmental hazards:	Not applicable.
- 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: 108-31-6 maleic anhydride

Monofunctional acid ester

- TSCA (Toxic Substances Control Act):

tetrahydrofurfuryl methacrylate	ACTIVE
Butanedioic acid	ACTIVE
Neoprene polychloroprene	ACTIVE
2-ethylhexyl methacrylate	ACTIVE
Desiccant	ACTIVE
Nipol 1472X	*
Ethoxylated Bisphenol A Dimethacrylate Esters	ACTIVE
maleic anhydride	ACTIVE
Amorphous Silica	ACTIVE
Soda-Lime Glass	ACTIVE
Monofunctional acid ester	ACTIVE
tetrahydro-2-furyl-methanol	ACTIVE
tert-butyl perbenzoate	ACTIVE
Polymerization inhibitor	ACTIVE

- Hazardous Air Pollutants

CAS: 108-31-6 maleic anhydride

- Proposition 65

- Chemicals known to cause cancer:

Neoprene polychloroprene

Nipol 1472X

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Trade name: Vibra-TITE® Methacrylate Adhesives

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- Chemicals known to cause reproductive toxicity for females:	
	Neoprene polychloroprene
CAS: 41637-38-1	Ethoxylated Bisphenol A Dimethacrylate Esters
	Monofunctional acid ester
- Chemicals known to cause reproductive toxicity for males:	
	Neoprene polychloroprene
	Monofunctional acid ester
- Chemicals known to cause developmental toxicity:	
CAS: 41637-38-1	Ethoxylated Bisphenol A Dimethacrylate Esters
	Monofunctional acid ester
- Carcinogenic categories	
- EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
- TLV (Threshold Limit Value)	
CAS: 108-31-6	maleic anhydride
	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

- **Classification System:**

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

HEALTH	3	Health = *3
FIRE	2	Fire = 2
REACTIVITY	0	Reactivity = 0

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

3	2	0	Health = 3
			Fire = 2
			Reactivity = 0

- **Date of preparation / last revision** 09/16/2021 / 14

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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
 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
 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 – Category 4
 Acute Tox. 4: Acute toxicity – Category 4
 Acute Tox. 3: Acute toxicity – Category 3
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Corr. 1C: Skin corrosion/irritation – Category 1C
 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
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Repr. 1B: Reproductive toxicity – Category 1B
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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

- **Disclaimer**

The information set forth is based on information that ND Industries, Incorporated believes to be accurate. No warranty, expressed or implied, is intended. The information is provided solely for your information and consideration and ND Industries Inc. assumes no

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acc. to OSHA HCS

Printing date 09/16/2021

Reviewed on 09/15/2021

Trade name: Vibra-TITE® Methacrylate Adhesives

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legal responsibility for use or reliance thereon. In the event of a discrepancy between the information on the non-English document and its English counterpart, the English version shall supersede.

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Safety Data Sheet

acc. to OSHA HCS

Printing date 09/16/2021

Reviewed on 06/23/2021

1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Methacrylate Adhesives
- **Synonyms:** PB500 Low Surface Energy Bonding Resin - Part B
- **Part number:** VTPB500B
- **Application of the substance / the mixture**
 - Raw materials for coatings
 - Raw material for 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. 1B H360 May damage 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.

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:

2-ethylhexyl methacrylate
tetrahydrofurfuryl methacrylate
Triethylborane-1,3-diaminopropane
tetrahydro-2-furylmethanol
Rosin

- Hazard statements

H227 Combustible liquid.
H315 Causes skin irritation.

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Trade name: Vibra-TITE® Methacrylate Adhesives

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H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H360 May damage fertility or the unborn child.
 H335 May cause respiratory irritation.

- Precautionary statements

P210 Keep away from flames and hot surfaces. – No smoking.
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 Wash 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 eye protection / face protection.
 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.
 P310 Immediately call a poison center/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P321 Specific treatment (see on this label).
 P312 Call a poison center/doctor 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.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 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: 2455-24-5	tetrahydrofurfuryl methacrylate	50 – 59%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
CAS: 688-84-6	2-ethylhexyl methacrylate	10 – 19%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335; Flam. Liq. 4, H227	
CAS: 69912-79-4	Desiccant	5 – 9%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
CAS: 148861-07-8	Triethylborane-1,3-diaminopropane	1 – 4%
	Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H312	
CAS: 8050-09-7	Rosin	≤ 1%
	Skin Sens. 1, H317	
CAS: 97-99-4	tetrahydro-2-furylmethanol	≤ 1%
	Repr. 1B, H360; Acute Tox. 4, H302; Eye Irrit. 2A, H319; Flam. Liq. 4, H227	

4 First-aid measures

- Description of first aid measures**- After inhalation:**

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.

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Reviewed on 06/23/2021

Trade name: Vibra-TITE® Methacrylate Adhesives

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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
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 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: 8050-09-7 Rosin

TLV	Long-term value: 0.001* mg/m ³ *inhalable fraction, DSEN, RSEN
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CAS: 97-99-4 tetrahydro-2-furylmethanol

WEEL	Long-term value: 0.5 ppm
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- **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.

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- 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.

- Body protection: Protective work clothing

9 Physical and chemical properties

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

Pasty

- Color:

According to product specification

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

≥ 59 – ≤ 62 °C (≥ 138.2 – ≤ 143.6 °F)

- Flash point:

≥ 92 °C (≥ 197.6 °F)

- Flammability (solid, gaseous):

Not applicable.

- 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:

Not determined.

- 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:**

Not determined.

- Kinematic:

Not determined.

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

0.2 %

- Water:

3.5 %

- VOC content:

0.23 %

0.0 g/l / 0.00 lb/gal

- Solids content:

14.7 %

- Other information

No further relevant information available.

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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)

Dermal	LD50	28,061 mg/kg
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CAS: 148861-07-8 Triethylborane-1,3-diaminopropane

Dermal	LD50	1,100 mg/kg (ATE)
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CAS: 97-99-4 tetrahydro-2-furymethanol

Oral	LD50	1,600 mg/kg (rat)
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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: 9010-98-4	Neoprene rubber	3
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CAS: 14807-96-6	Soapstone	3
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- NTP (National Toxicology Program)

None of the ingredients is listed.		
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- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.		
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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 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- 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.

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14 Transport information

- UN-Number - DOT, IMDG, IATA	UN1760
- UN proper shipping name - DOT - IMDG, IATA	Corrosive liquids, n.o.s. (Triethylborane-1,3-diaminopropane) CORROSIVE LIQUID, N.O.S. (Triethylborane-1,3-diaminopropane)
- Transport hazard class(es) - DOT	
	
- Class - Label	8 Corrosive substances 8
- IMDG, IATA	
	
- Class - Label	8 Corrosive substances 8
- Packing group - DOT, IMDG, IATA	II
- Environmental hazards:	Not applicable.
- Special precautions for user - Hazard identification number (Kemler code): - EMS Number: - Segregation groups - Stowage Category - Stowage Code	Warning: Corrosive substances 80 F-A, S-B Alkalis B SW2 Clear of living quarters.
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
- Transport/Additional information: - DOT - Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
- 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
- UN "Model Regulation":	UN 1760 CORROSIVE LIQUID, N.O.S. (TRIETHYLBORANE-1,3-DIAMINOPROPANE), 8, II

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):

None of the ingredients is listed.

- TSCA (Toxic Substances Control Act):

tetrahydrofurfuryl methacrylate	ACTIVE
2-ethylhexyl methacrylate	ACTIVE

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Neoprene rubber	ACTIVE
Desiccant	ACTIVE
Amorphous Silica	ACTIVE
Deionized water	ACTIVE
N-isopropylhydroxylamine	ACTIVE
Rosin	ACTIVE
tetrahydro-2-furylmethanol	ACTIVE
trimethylenediamine	ACTIVE
Soapstone	ACTIVE
2-Propanone, oxime	ACTIVE
Polymerization inhibitor	ACTIVE

- Hazardous Air Pollutants

None of the ingredients is listed.

- 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)

CAS: 14807-96-6 | Soapstone

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
- Classification System:**

- HMIS-ratings (scale 0 - 4)

HEALTH	3	Health = 3
FIRE	2	Fire = 2
REACTIVITY	0	Reactivity = 0

- NFPA ratings (scale 0 - 4)

3	2	0	Health = 3
			Fire = 2
			Reactivity = 0

- Date of preparation / last revision 09/16/2021 / 12**- Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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
 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
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value

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PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 4: Flammable liquids – Category 4
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
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

- **Disclaimer**

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