

Kit Components

Product code	Description
VTPB422	Vibra-TITE® Methacrylate Adhesives PB422 Medium Set Time - Structural

Components:

VTPB422A	Vibra-TITE® Methacrylate Adhesives PB422 Medium Set Time - Structural - Part A
VTPB422B	Vibra-TITE® Methacrylate Adhesives PB422 Medium Set Time - Structural - Part B

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/09/2018

Reviewed on 01/03/2018

1 Identification**- Product identifier**

- **Trade name:** Vibra-TITE® Methacrylate Adhesives
- **Synonyms:** PB422 Medium Set Time - Structural - Part A
- **Part number:** VTPB422A
- **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**

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



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.

- Label elements**- GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**- Hazard pictograms**

GHS02 GHS05 GHS07

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

methyl methacrylate
methacrylic acid
Rosin

- Hazard statements

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

- Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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P242	Use only non-sparking tools.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280	Wear protective gloves.
P280	Wear eye protection / face protection.
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.
P310	Immediately call a poison center/doctor.
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:

2 % of the mixture consists of component(s) of unknown toxicity.

- Classification system:**- NFPA ratings (scale 0 - 4)**

	Health = 3
	Fire = 3
	Reactivity = 0

- HMIS-ratings (scale 0 - 4)

	Health = 3
	Fire = 3
	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:**

80-62-6	methyl methacrylate	70 – 79%
	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	
	Impact modifying resin	10 – 19%
	Skin Irrit. 2, H315	
79-41-4	methacrylic acid	1 – 4%
	Acute Tox. 3, H311; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H335; Flam. Liq. 4, H227	
41637-38-1	Ethoxylated Bisphenol A Dimethacrylate Esters	1 – 4%
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
8050-09-7	Rosin	≤ 1%
	Skin Sens. 1, H317	

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

Supply fresh air and to be sure call for a doctor.
 In case of unconsciousness place patient stably in side position for transportation.
 Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.- **After swallowing:** If symptoms persist consult doctor.**- Information for doctor:**- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
CO₂, sand, extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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
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).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
 - **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
 - **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **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.

80-62-6 methyl methacrylate

PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Long-term value: 410 mg/m ³ , 100 ppm
TLV	Short-term value: 410 mg/m ³ , 100 ppm Long-term value: 205 mg/m ³ , 50 ppm DSEN

79-41-4 methacrylic acid

REL	Long-term value: 70 mg/m ³ , 20 ppm Skin
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TLV	Long-term value: 70 mg/m ³ , 20 ppm
8050-09-7 Rosin	
TLV	DSEN, RSEN, L

- **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

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

- **Form:** Viscous

- **Color:** Whitish

- **Odor:** Pungent

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- Change in condition

- **Melting point/Melting range:** Undetermined.

- **Boiling point/Boiling range:** 101 °C (213.8 °F)

- **Flash point:** 10 °C (50 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 430 °C (806 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- Explosion limits:

- **Lower:** 2.1 Vol %

- **Upper:** 12.5 Vol %

- **Vapor pressure at 20 °C (68 °F):** 47 hPa (35.3 mm Hg)

- **Density:** Not determined.

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- 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 at 20 °C (68 °F):	180,000 mm ² /s
- Solvent content:	
- Organic solvents:	0.2 %
- Water:	0.0 %
- VOC content:	0.16 % 1.6 g/l / 0.01 lb/gl
- Solids content:	30.0 %
- 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:

80-62-6 methyl methacrylate

Oral	LD50	7,872 mg/kg (rat)
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Impact modifying resin

Oral	LD50	10,000 mg/kg (rat)
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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)

99-97-8 N,N-dimethyl-p-toluidine

Oral	LD50	100 mg/kg (ATE)
Dermal	LD50	300 mg/kg (ATE)
Inhalative	LC50/4 h	3 mg/l (ATE)

- 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)

80-62-6	methyl methacrylate	3
9010-98-4	Neoprene rubber	3
14807-96-6	Soapstone	3

- NTP (National Toxicology Program)

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

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 	UN1133
<ul style="list-style-type: none"> - UN proper shipping name <li style="padding-left: 20px;">- DOT <li style="padding-left: 20px;">- IMDG, IATA 	Adhesives ADHESIVES
<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"> <li style="padding-left: 20px;">- Class <li style="padding-left: 20px;">- Label 	3 Flammable liquids 3
<ul style="list-style-type: none"> - IMDG, IATA 	
<div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li style="padding-left: 20px;">- Class <li style="padding-left: 20px;">- Label 	3 Flammable liquids 3
<ul style="list-style-type: none"> - Packing group <li style="padding-left: 20px;">- DOT, IMDG, IATA 	III
<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 	Warning: Flammable liquids - F-E,S-D A
<ul style="list-style-type: none"> - Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.

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- Transport/Additional information:	
- DOT	
- Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
- IMDG	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation":	UN 1133 ADHESIVES, 3, 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):		
80-62-6	methyl methacrylate	
- TSCA (Toxic Substances Control Act):		
methyl methacrylate		
Neoprene rubber		
methacrylic acid		
Ethoxylated Bisphenol A Dimethacrylate Esters		
N,N-dimethyl-p-toluidine		
Rosin		
Propylene glycol		
Polymerization inhibitor		
Soapstone		
1,4-naphthoquinone		
tetrasodium ethylenediaminetetraacetate		
Deionized water		
- TSCA new (21st Century Act) (Substances not listed)		
	Impact modifying resin	
41637-38-1	Ethoxylated Bisphenol A Dimethacrylate Esters	
- Proposition 65		
- Chemicals known to cause cancer:		
99-97-8	N,N-dimethyl-p-toluidine	
- 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)		
80-62-6	methyl methacrylate	E, NL
- TLV (Threshold Limit Value established by ACGIH)		
80-62-6	methyl methacrylate	A4
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.		

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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** 05/09/2018 / 12

- **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. 2: Flammable liquids – Category 2

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

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

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- * **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 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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1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Methacrylate Adhesives
- **Synonyms:** PB422 Medium Set Time - Structural - Part B
- **Part number:** VTPB422B
- **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

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2A H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
 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**



GHS07 GHS08

- **Signal word** Warning

- Hazard-determining components of labeling:

Polyester catalyst
 Bisphenol-A epoxy resin
 dimethylbenzyl hydroperoxide

- Hazard statements

H227 Combustible liquid.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H351 Suspected of causing cancer.
 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- Precautionary statements

P210 Keep away from flames and hot surfaces. – No smoking.
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray

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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 eye protection / face protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P330	Rinse mouth.
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.
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.
P321	Specific treatment (see on this label).
P337+P313	If eye irritation persists: 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.

- Classification system:**- NFPA ratings (scale 0 - 4)**

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

- HMIS-ratings (scale 0 - 4)

HEALTH 2	Health = *2
FIRE 2	Fire = 2
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:

25068-38-6	Bisphenol-A epoxy resin Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	50 – 59%
	Polyester catalyst Acute Tox. 3, H301; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1B, H317; STOT SE 3, H335-H336; Flam. Liq. 4, H227	40 – 49%
80-15-9	dimethylbenzyl hydroperoxide Self-react. F, H242; Org. Perox. E, H242; Acute Tox. 3, H331; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; STOT SE 3, H335; Flam. Liq. 4, H227	1 – 4%
67762-90-7	Synthetic amorphous silica (fumed) Combustible Dust	1 – 4%
98-82-8	cumene Flam. Liq. 3, H226; Carc. 2, H351; Asp. Tox. 1, H304; Acute Tox. 4, H302; STOT SE 3, H335	≤ 1%

4 First-aid measures**- Description of first aid measures****- General information:**

- 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.

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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, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
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:**

Mouth respiratory protective device.
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:

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:

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: 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:**

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.

80-15-9 dimethylbenzyl hydroperoxide

WEEL	Long-term value: 6 mg/m ³ , 1 ppm Skin
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98-82-8 cumene

PEL	Long-term value: 245 mg/m ³ , 50 ppm Skin
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REL	Long-term value: 245 mg/m ³ , 50 ppm Skin
TLV	Long-term value: (246) NIC-0.5 mg/m ³ , (50) NIC-0.1 ppm NIC-A3

- **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 skin.
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:

Viscous

- Color:

Whitish

- Odor:

Pungent

- Odor threshold:

Not determined.

- pH-value:

Not determined.

- Change in condition

- Melting point/Melting range:

Undetermined.

- Boiling point/Boiling range:

150 °C (302 °F)

- Flash point:

84 °C (183.2 °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):

0.96 g/cm³ (8.0112 lbs/gal)

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- Relative density	Not determined.
- Vapor density	Not determined.
- Evaporation rate	Not determined.
- Solubility in / Miscibility with	
- Water:	Not miscible or difficult to mix.
- Partition coefficient (n-octanol/water):	Not determined.
- Viscosity:	
- Dynamic at 20 °C (68 °F):	80,000 mPas
- Kinematic:	Not determined.
- Solvent content:	
- Organic solvents:	0.3 %
- VOC content:	0.30 %
	2.9 g/l / 0.02 lb/gl
- Solids content:	57.0 %
- 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:

Polyester catalyst		
Oral	LD50	100 mg/kg (ATE)
80-15-9 dimethylbenzyl hydroperoxide		
Oral	LD50	382 mg/kg (rat)
Dermal	LD50	500 mg/kg (rat)
Inhalative	LC50/4 h	220 mg/l (rat)
98-82-8 cumene		
Oral	LD50	1,400 mg/kg (rat)
Dermal	LD50	12,300 mg/kg (rabbit)
Inhalative	LC50/4 h	24.7 mg/l (mouse)

- Primary irritant effect:

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** 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)		
98-82-8	cumene	2B
128-37-0	Butylated hydroxytoluene	3
- NTP (National Toxicology Program)		
98-82-8	cumene	R
- 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.
- **Ecotoxicological effects:**
 - **Remark:** Toxic for fish
- **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.
 - Also poisonous for fish and plankton in water bodies.
 - Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.

*14 Transport information

<ul style="list-style-type: none"> - UN-Number - DOT - IMDG, IATA 	<p style="margin-left: 20px;">not regulated</p> <p style="margin-left: 20px;">UN3082</p>
<ul style="list-style-type: none"> - UN proper shipping name - DOT - IMDG - IATA 	<p style="margin-left: 20px;">not regulated</p> <p style="margin-left: 20px;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol-A-(epichlorhydrin); epoxy resin, dimethylbenzyl hydroperoxide), MARINE POLLUTANT</p> <p style="margin-left: 20px;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol-A-(epichlorhydrin); epoxy resin, dimethylbenzyl hydroperoxide)</p>
<ul style="list-style-type: none"> - Transport hazard class(es) - DOT - Class 	<p style="margin-left: 20px;">not regulated</p>
<ul style="list-style-type: none"> - IMDG, IATA <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> - Class - Label 	<p style="margin-left: 20px;">9 Miscellaneous dangerous substances and articles</p> <p style="margin-left: 20px;">9</p>
<ul style="list-style-type: none"> - Packing group - DOT - IMDG, IATA 	<p style="margin-left: 20px;">not regulated</p> <p style="margin-left: 20px;">III</p>
<ul style="list-style-type: none"> - Environmental hazards: - Marine pollutant: - Special marking (IATA): 	<p style="margin-left: 20px;">Product contains environmentally hazardous substances: bisphenol-A-(epichlorhydrin); epoxy resin</p> <p style="margin-left: 20px;">Yes</p> <p style="margin-left: 20px;">Symbol (fish and tree)</p> <p style="margin-left: 20px;">Symbol (fish and tree)</p>
<ul style="list-style-type: none"> - Special precautions for user 	<p style="margin-left: 20px;">Warning: Miscellaneous dangerous substances and articles</p>

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- Danger code (Kemler):	90
- EMS Number:	F-A,S-F
- Stowage Category	A
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
- Transport/Additional information:	
- IMDG	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (BISPHENOL-A-(EPICHLORHYDRIN); EPOXY RESIN, DIMETHYLBENZYL HYDROPEROXIDE), 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):

80-15-9 dimethylbenzyl hydroperoxide

98-82-8 cumene

- TSCA (Toxic Substances Control Act):

Bisphenol-A epoxy resin

Butyl acrylate-methyl methacrylate polymer

dimethylbenzyl hydroperoxide

Synthetic amorphous silica (fumed)

cumene

2-Phenyl-2-propanol

calcium carbonate

Butylated hydroxytoluene

Polymerization inhibitor

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

Polyester catalyst

- Proposition 65

- Chemicals known to cause cancer:

98-82-8 cumene

- 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)

98-82-8 cumene

D, CBD

- TLV (Threshold Limit Value established by ACGIH)

128-37-0 Butylated hydroxytoluene

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.

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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** 05/09/2018 / 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

Self-react. F: Self-reactive substances and mixtures – Type E/F

Org. Perox. E: Organic peroxides – Type E/F

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

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

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Carc. 2: Carcinogenicity – Category 2

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

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

- **Disclaimer**

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