

Kit Components

| Product code | Description |
|----------------|---------------------------------|
| VT27005 | Vibra-TITE® Bench Pack 5 |

Components:

| | |
|-------|--------------------------------|
| VT541 | Vibra-TITE® Retaining Compound |
| VT121 | Vibra-TITE® Threadlocker |
| VT140 | Vibra-TITE® Threadlocker |
| VT470 | DriveGrip® |
| VT150 | Vibra-TITE® Threadlocker |

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/22/2024

1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Retaining Compound

- **Synonyms:** 541 High Strength - Slip Fit Retaining Compound

- **Part number:** VT541

- **Application of the substance / the mixture**

Assembly adhesive

Retaining agents

- 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

Carcinogenicity 2 H351 Suspected of causing cancer.



GHS05 Corrosion

Eye Damage 1 H318 Causes serious eye damage.



GHS07

Skin Irritation 2 H315 Causes skin irritation.

Sensitization - Skin 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 GHS08

- **Signal word** Danger

- Hazard-determining components of labeling:

methacrylic acid, monoester with propane-1,2-diol

acrylic acid

Cumene

Diacrylate

7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate

2'-phenylacetohydrazide

- Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

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Reviewed on 01/22/2024

Trade name: Vibra-TITE® Retaining Compound

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- Precautionary statements

| | |
|----------------|--|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray |
| P264 | Wash thoroughly after handling. |
| 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. |
| 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. |
| P310 | Immediately call a poison center/doctor. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| 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. |
| P363 | Wash contaminated clothing before reuse. |
| 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: 27813-02-1 | methacrylic acid, monoester with propane-1,2-diol Eye Irritation 2A, H319; Sensitization - Skin 1, H317 | 20 – 29% |
| | Acrylic polymer Combustible Dust | 10 – 19% |
| CAS: 7779-31-9 | Methacrylate onomer Skin Irritation 2, H315; Eye Irritation 2A, H319 | 10 – 19% |
| CAS: 42594-17-2 | Diacrylate Sensitization - Skin 1, H317 | 10 – 19% |
| CAS: 72869-86-4 | 7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate Sensitization - Skin 1, H317; Flammable Liquids 4, H227 | 5 – 9% |
| CAS: 79-10-7 | acrylic acid Flammable Liquids 3, H226; Skin Corrosion 1A, H314; Eye Damage 1, H318; Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Acute Toxicity - Inhalation 4, H332 | 4.90% |
| CAS: 80-15-9 | dimethylbenzyl hydroperoxide Self-reactive substances and mixtures - Type F, H242; Organic Peroxides - Type E, H242; Acute Toxicity - Inhalation 3, H331; Specific Target Organ Toxicity - Repeated Exposure 2, H373; Aspiration Hazard 1, H304; Skin Corrosion 1B, H314; Eye Damage 1, H318; Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227 | ≤ 1% |
| CAS: 79-41-4 | Methacrylic acid Acute Toxicity - Dermal 3, H311; Skin Corrosion 1A, H314; Eye Damage 1, H318; Acute Toxicity - Oral 4, H302; Acute Toxicity - Inhalation 4, H332; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227 | ≤ 1% |
| CAS: 114-83-0 | 2'-phenylacetohydrazide Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |
| CAS: 98-82-8 | Cumene Flammable Liquids 3, H226; Carcinogenicity 2, H351; Aspiration Hazard 1, H304; Acute Toxicity - Oral 4, H302; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |

4 First-aid measures

- Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.

- After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

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Trade name: Vibra-TITE® Retaining Compound

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- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
 - **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to section 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 section 7.
- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
At this time, the other constituents have no known exposure limits.

CAS: 79-10-7 acrylic acid

REL Long-term value: 6 mg/m³, 2 ppm
SkinTLV Long-term value: 2 ppm
Skin, A3

CAS: 80-15-9 dimethylbenzyl hydroperoxide

WEEL Long-term value: 6 mg/m³, 1 ppm
Skin

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Trade name: Vibra-TITE® Retaining Compound

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| | |
|--------------------------------------|---|
| CAS: 79-41-4 Methacrylic acid | |
| REL | Long-term value: 70 mg/m ³ , 20 ppm Skin |
| TLV | Long-term value: 20 ppm |
| CAS: 98-82-8 Cumene | |
| PEL | Long-term value: 245 mg/m ³ , 50 ppm Skin |
| REL | Long-term value: 245 mg/m ³ , 50 ppm Skin |
| TLV | Long-term value: 5 ppm 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 eyes and skin.

- Breathing equipment:

Not required.
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:

Fluid

- Color:

Green

- Odor:

Weak, characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

- Change in condition

- Melting point/Melting range:

Undetermined.

- Boiling point/Boiling range:

≥ 209 °C (≥ 408.2 °F)

- Flash point:

95 °C (203 °F)

- Flammability (solid, gaseous):

Not applicable.

- Decomposition temperature:

Not determined.

- Ignition temperature:

Product is not selfigniting.

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Trade name: Vibra-TITE® Retaining Compound

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| | |
|---|---|
| - Danger of explosion: | Product does not present an explosion hazard. |
| - Explosion limits: | |
| - Lower: | Not determined. |
| - Upper: | Not determined. |
| - Vapor pressure at 20 °C (68 °F): | ≤ 0.1 hPa |
| - Density at 20 °C (68 °F): | ~ 1.1 g/cm ³ (~ 9.1795 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 at 20 °C (68 °F): | 1,500 mPas |
| - Kinematic: | Not determined. |
| - Solvent content: | |
| - Organic solvents: | 0.7 % |
| - Water: | 1.0 % |
| - VOC content: | 0.70 % ~ 7.7 g/l / ~ 0.06 lb/gal |
| - Solids content: | 0.7 % |
| - 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 | 5,102 mg/kg (rat) |
| Dermal | LD50 | 5,236 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 222 mg/l |

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: 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) |

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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Trade name: Vibra-TITE® Retaining Compound

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CAS: 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:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** Sensitization possible through skin contact.

- Additional toxicological information:

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

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories**- IARC (International Agency for Research on Cancer)**

| | | |
|----------------|---------------|----|
| CAS: 79-10-7 | acrylic acid | 3 |
| CAS: 98-82-8 | Cumene | 2B |
| CAS: 91-20-3 | naphthalene | 2B |
| CAS: 1330-20-7 | Mixed Xylenes | 3 |
| CAS: 100-41-4 | ethylbenzene | 2B |

- NTP (National Toxicology Program)

| | | |
|---------------|--------------------|---|
| CAS: 98-82-8 | Cumene | R |
| CAS: 130-15-4 | 1,4-naphthoquinone | R |
| CAS: 91-20-3 | naphthalene | R |

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information**- Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- Behavior in environmental systems:

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- Ecotoxicological effects:

- **Remark:** Harmful to fish

- Additional ecological information:**- General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Harmful to aquatic organisms

- Results of PBT and vPvB assessment

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations**- Waste treatment methods**

- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information**- UN-Number**

- **DOT, IMDG, IATA**

not regulated

- UN proper shipping name

- **DOT, IMDG, IATA**

not regulated

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Trade name: Vibra-TITE® Retaining Compound

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| | |
|--|-----------------|
| - Transport hazard class(es) - DOT, ADN, IMDG, IATA - Class | not regulated |
| - Packing group - DOT, 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 |
| CAS: 80-15-9 | dimethylbenzyl hydroperoxide |
| CAS: 98-82-8 | Cumene |
| CAS: 98-86-2 | acetophenone |
| CAS: 91-20-3 | naphthalene |
| CAS: 1330-20-7 | Mixed Xylenes |
| CAS: 100-41-4 | ethylbenzene |

- TSCA (Toxic Substances Control Act):

| | |
|---|--------|
| methacrylic acid, monoester with propane-1,2-diol | ACTIVE |
| Acrylic polymer | ACTIVE |
| Methacrylate onomer | ACTIVE |
| Diacrylate | ACTIVE |
| 7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate | ACTIVE |
| acrylic acid | ACTIVE |
| Deionized water | ACTIVE |
| dimethylbenzyl hydroperoxide | 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 |
| Cumene | ACTIVE |
| 2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole) | ACTIVE |
| tetrasodium ethylenediaminetetraacetate | ACTIVE |
| Distillates (petroleum), hydrotreated light naphthenic | ACTIVE |
| Colorant | ACTIVE |
| acetophenone | ACTIVE |
| 2-Phenyl-2-propanol | ACTIVE |
| Solvent Yellow 126 | ACTIVE |
| N-isopropylhydroxylamine | ACTIVE |
| 1-hydroxyethane-1,1-diylbis(phosphonic acid) | ACTIVE |
| Solvent naphtha (petroleum), heavy arom. | ACTIVE |
| 1,4-naphthoquinone | ACTIVE |
| naphthalene | ACTIVE |
| 2-Propanone, oxime | ACTIVE |

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Trade name: Vibra-TITE® Retaining Compound

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| | |
|------------------|--------|
| phosphorous acid | ACTIVE |
| Mixed Xylenes | ACTIVE |
| ethylbenzene | ACTIVE |

- Hazardous Air Pollutants

| | |
|----------------|--------------------|
| CAS: 79-10-7 | acrylic acid |
| CAS: 98-82-8 | Cumene |
| CAS: 98-86-2 | acetophenone |
| CAS: 130-15-4 | 1,4-naphthoquinone |
| CAS: 91-20-3 | naphthalene |
| CAS: 1330-20-7 | Mixed Xylenes |
| CAS: 100-41-4 | ethylbenzene |

- Proposition 65**- Chemicals known to cause cancer:**

| | |
|---------------|--------------|
| CAS: 98-82-8 | Cumene |
| CAS: 91-20-3 | naphthalene |
| CAS: 100-41-4 | ethylbenzene |

- 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)**

| | | |
|----------------|---------------|--------|
| CAS: 98-82-8 | Cumene | D, CBD |
| CAS: 98-86-2 | acetophenone | D |
| CAS: 91-20-3 | naphthalene | C, CBD |
| CAS: 1330-20-7 | Mixed Xylenes | I |
| CAS: 100-41-4 | ethylbenzene | D |

- TLV (Threshold Limit Value)

| | | |
|----------------|---------------|----|
| CAS: 79-10-7 | acrylic acid | A4 |
| CAS: 91-20-3 | naphthalene | A4 |
| CAS: 1330-20-7 | Mixed Xylenes | A4 |
| CAS: 100-41-4 | ethylbenzene | A3 |

- 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 | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

- NFPA ratings (scale 0 - 4)

| | | | |
|---|---|---|----------------|
| 3 | 1 | 0 | Health = 3 |
| | | | Fire = 1 |
| | | | Reactivity = 0 |

- Date of preparation / last revision 01/23/2024**- 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

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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
 Flammable Liquids 3: Flammable liquids – Category 3
 Flammable Liquids 4: Flammable liquids – Category 4
 Self-reactive substances and mixtures - Type F: Self-reactive substances and mixtures – Type E/F
 Organic Peroxides - Type E: Organic peroxides – Type E/F
 Acute Toxicity - Oral 4: Acute toxicity – Category 4
 Acute Toxicity - Inhalation 3: Acute toxicity – Category 3
 Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
 Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
 Skin Irritation 2: Skin corrosion/irritation – Category 2
 Eye Damage 1: Serious eye damage/eye irritation – Category 1
 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
 Sensitization - Skin 1: Skin sensitisation – Category 1
 Carcinogenicity 2: Carcinogenicity – Category 2
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
 Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2
 Aspiration Hazard 1: Aspiration hazard – 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 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 01/23/2024

Reviewed on 01/04/2024

1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Threadlocker
- **Synonyms:** 121 Medium Strength Threadlocker
- **Part number:** VT121
- **Application of the substance / the mixture** Thread Locking

- 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

Carcinogenicity 2

H351 Suspected of causing cancer.



GHS07

Skin Irritation 2

H315 Causes skin irritation.

Eye Irritation 2A

H319 Causes serious eye irritation.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure 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



GHS07 GHS08

- **Signal word** Warning

- Hazard-determining components of labeling:

2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate
Cumene
2'-phenylacetohydrazide

- Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.

- Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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.

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 1)

| | |
|----------------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P280 | Wear protective gloves. |
| P280 | Wear eye protection / face protection. |
| P302+P352 | If on skin: Wash with plenty of water. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| P312 | Call a poison center/doctor if you feel unwell. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| 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. |
| P363 | Wash contaminated clothing before reuse. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

- 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: 25852-47-5 | 2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate Skin Irritation 2, H315; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335 | 60 – 69% |
| CAS: 80-15-9 | dimethylbenzyl hydroperoxide Self-reactive substances and mixtures - Type F, H242; Organic Peroxides - Type E, H242; Acute Toxicity - Inhalation 3, H331; Specific Target Organ Toxicity - Repeated Exposure 2, H373; Aspiration Hazard 1, H304; Skin Corrosion 1B, H314; Eye Damage 1, H318; Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227 | ≤ 1% |
| CAS: 114-83-0 | 2'-phenylacetohydrazide Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |
| CAS: 98-82-8 | Cumene Flammable Liquids 3, H226; Carcinogenicity 2, H351; Aspiration Hazard 1, H304; Acute Toxicity - Oral 4, H302; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |

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.

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.

(Contd. on page 3)

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acc. to OSHA HCS

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Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 2)

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:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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.

No special precautions are necessary if used correctly.

- 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.

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 section 7.

- Control parameters

- Components with limit values that require monitoring at the workplace:

At this time, the other constituents have no known exposure limits.

CAS: 80-15-9 dimethylbenzyl hydroperoxide

| | |
|------|--|
| WEEL | Long-term value: 6 mg/m ³ , 1 ppm |
| | Skin |

CAS: 98-82-8 Cumene

| | |
|-----|---|
| PEL | Long-term value: 245 mg/m ³ , 50 ppm |
| | Skin |

| | |
|-----|---|
| REL | Long-term value: 245 mg/m ³ , 50 ppm |
| | Skin |

| | |
|-----|------------------------|
| TLV | Long-term value: 5 ppm |
| | 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 eyes and skin.

- Breathing equipment:

Not required.

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.

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Trade name: Vibra-TITE® Threadlocker

(Contd. of page 3)

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: 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:**

Liquid

- Color:

Blue

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

≥ 200 °C (≥ 392 °F)

- Flash point:

95 °C (203 °F)

- 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 20 °C (68 °F):

n.a. hPa

- Density at 20 °C (68 °F):~ 1.07 g/cm³ (~ 8.92915 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:**

1.0 %

- Water:

0.4 %

- VOC content:

0.98 %

~ 10.5 g/l / ~ 0.09 lb/gal

- Solids content:

96.1 %

- 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.

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Trade name: Vibra-TITE® Threadlocker

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- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
Aldehyde
Hydrocarbons

11 Toxicological information

- Information on toxicological effects

- Acute toxicity:

- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

| | | |
|------------|----------|-------------------|
| Inhalative | LC50/4 h | 26,190 mg/l (rat) |
|------------|----------|-------------------|

CAS: 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) |
|------------|----------|----------------|

CAS: 114-83-0 2'-phenylacetohydrazide

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

CAS: 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:** 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: 98-82-8 | Cumene | 2B |
|--------------|--------|----|

| | | |
|-----------------|------------------|----|
| CAS: 13463-67-7 | titanium dioxide | 2B |
|-----------------|------------------|----|

- NTP (National Toxicology Program)

| | | |
|--------------|--------|---|
| CAS: 98-82-8 | Cumene | R |
|--------------|--------|---|

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

- 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.

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Trade name: Vibra-TITE® Threadlocker

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- 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: - 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: 80-15-9 dimethylbenzyl hydroperoxide

CAS: 98-82-8 Cumene

CAS: 98-86-2 acetophenone

- TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

- Hazardous Air Pollutants

CAS: 98-82-8 Cumene

CAS: 98-86-2 acetophenone

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

- Proposition 65**- Chemicals known to cause cancer:**

CAS: 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)**

CAS: 98-82-8 Cumene

D, CBD

CAS: 98-86-2 acetophenone

D

- TLV (Threshold Limit Value)

CAS: 13463-67-7 titanium dioxide

A4

- NIOSH-Ca (National Institute for Occupational Safety and Health)

CAS: 13463-67-7 titanium dioxide

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Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

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- **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 | 2 | Health = 2 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

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

| | |
|------------|---|
| Health | 2 |
| Fire | 1 |
| Reactivity | 0 |

- **Date of preparation / last revision** 01/23/2024

- **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
 Flammable Liquids 3: Flammable liquids – Category 3
 Flammable Liquids 4: Flammable liquids – Category 4
 Self-reactive substances and mixtures - Type F: Self-reactive substances and mixtures – Type E/F
 Organic Peroxides - Type E: Organic peroxides – Type E/F
 Acute Toxicity - Oral 4: Acute toxicity – Category 4
 Acute Toxicity - Inhalation 3: Acute toxicity – Category 3
 Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
 Skin Irritation 2: Skin corrosion/irritation – Category 2
 Eye Damage 1: Serious eye damage/eye irritation – Category 1
 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
 Sensitization - Skin 1: Skin sensitisation – Category 1
 Carcinogenicity 2: Carcinogenicity – Category 2
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
 Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2
 Aspiration Hazard 1: Aspiration hazard – 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 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 01/23/2024

Reviewed on 01/04/2024

1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Threadlocker
- **Synonyms:** 140 High Strength Threadlocker
- **Part number:** VT140
- **Application of the substance / the mixture** Thread Locking

- 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



GHS07

| | |
|--|---|
| Skin Irritation 2 | H315 Causes skin irritation. |
| Eye Irritation 2A | H319 Causes serious eye irritation. |
| Sensitization - Skin 1 | H317 May cause an allergic skin reaction. |
| Specific Target Organ Toxicity - Single Exposure 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



GHS07

- Signal word Warning

- Hazard-determining components of labeling:

2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate
Bisphenol A epoxy Acrylate
Modified Epoxy Acrylate Oligomer
2-carboxyethyl acrylate
2-Butenedioic acid (2Z)
2'-phenylacetohydrazide

- Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

- Precautionary statements

| | |
|-----------|--|
| 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. |
| P280 | Wear eye protection / face protection. |
| P302+P352 | If on skin: Wash with plenty of water. |

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Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 1)

| | |
|----------------|--|
| 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. |
| 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. |
| P321 | Specific treatment (see on this label). |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P363 | Wash contaminated clothing before reuse. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

- 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: 25852-47-5 | 2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate Skin Irritation 2, H315; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335 | 30 – 39% |
| CAS: 10595-06-9 | 2-phenoxyethyl methacrylate Skin Irritation 2, H315; Eye Irritation 2A, H319 | 20 – 29% |
| | Acrylic polymer Combustible Dust | 10 – 19% |
| CAS: 1985-51-9 | Neopentylglycol Dimethacrylate Skin Irritation 2, H315; Eye Irritation 2A, H319 | 9.20% |
| | Bisphenol A epoxy Acrylate Sensitization - Skin 1, H317 | 5 – 9% |
| | Modified Epoxy Acrylate Oligomer Explosives 1.3, H203; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317 | 1 – 4% |
| CAS: 35227-05-5 | 2-Propenoic acid, 2-methyl-, polymer Combustible Dust | 1 – 4% |
| CAS: 24615-84-7 | 2-carboxyethyl acrylate Skin Corrosion 1B, H314; Eye Damage 1, H318; Specific Target Organ Toxicity - Single Exposure 3, H335 | 1 – 4% |
| CAS: 80-15-9 | dimethylbenzyl hydroperoxide Self-reactive substances and mixtures - Type F, H242; Organic Peroxides - Type E, H242; Acute Toxicity - Inhalation 3, H331; Specific Target Organ Toxicity - Repeated Exposure 2, H373; Aspiration Hazard 1, H304; Skin Corrosion 1B, H314; Eye Damage 1, H318; Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227 | ≤ 1% |
| CAS: 110-16-7 | 2-Butenedioic acid (2Z) Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |
| CAS: 114-83-0 | 2'-phenylacetohydrazide Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |

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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 2)

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:**
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).
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.
No special precautions are necessary if used correctly.
 - **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.
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 section 7.
- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

CAS: 80-15-9 dimethylbenzyl hydroperoxide

| | |
|------|--|
| WEEL | Long-term value: 6 mg/m ³ , 1 ppm Skin |
|------|--|

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

- **Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
 - **Breathing equipment:**
Not required.
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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 3)

- 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: 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:**

Fluid

- Color:

Red

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

> 140 °C (> 284 °F)

- Flash point:

94 °C (201.2 °F)

- Flammability (solid, gaseous):

Not applicable.

- Auto igniting:

n.a. °C

- 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:

Not determined.

- Density at 20 °C (68 °F):~ 1.1 g/cm³ (~ 9.1795 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:**

0.7 %

- Water:

0.8 %

- VOC content:

0.68 %

~ 7.4 g/l / ~ 0.06 lb/gal

- Solids content:

39.6 %

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 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.
- **Hazardous decomposition products:**
 - Aldehyde
 - Hydrocarbons

11 Toxicological information

- Information on toxicological effects

- Acute toxicity:

- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

| | | |
|------------|----------|-------------------|
| Inhalative | LC50/4 h | 29,101 mg/l (rat) |
|------------|----------|-------------------|

CAS: 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) |

CAS: 110-16-7 2-Butenedioic acid (Z)

| | | |
|--------|------|----------------------|
| Oral | LD50 | 708 mg/kg (rat) |
| Dermal | LD50 | 1,560 mg/kg (rabbit) |

CAS: 114-83-0 2'-phenylacetohydrazide

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

- 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: 9003-01-4 | 2-propenoic acid, homopolymer | 3 |
| CAS: 79-10-7 | acrylic acid | 3 |
| CAS: 98-82-8 | Cumene | 2B |

- NTP (National Toxicology Program)

| | | |
|---------------|--------------------|---|
| CAS: 98-82-8 | Cumene | R |
| CAS: 130-15-4 | 1,4-naphthoquinone | R |

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Harmful to fish
- **Additional ecological information:**
 - **General notes:**
 - Water hazard class 1 (Self-assessment): slightly hazardous for water

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 5)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms

- Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- Waste treatment methods

- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

| | |
|--|-----------------|
| - UN-Number | |
| - DOT, IMDG, IATA | not regulated |
| - UN proper shipping name | |
| - DOT, IMDG, IATA | not regulated |
| - Transport hazard class(es) | |
| - DOT, ADN, IMDG, IATA | |
| - Class | not regulated |
| - Packing group | |
| - DOT, 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: 1985-51-9 | Neopentylglycol Dimethacrylate |
| CAS: 80-15-9 | dimethylbenzyl hydroperoxide |
| CAS: 79-10-7 | acrylic acid |
| CAS: 98-82-8 | Cumene |
| CAS: 98-86-2 | acetophenone |

- TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

- Hazardous Air Pollutants

| | |
|---------------|--------------------|
| CAS: 79-10-7 | acrylic acid |
| CAS: 98-82-8 | Cumene |
| CAS: 98-86-2 | acetophenone |
| CAS: 130-15-4 | 1,4-naphthoquinone |

- Proposition 65**- Chemicals known to cause cancer:**

CAS: 98-82-8 | Cumene

- Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/04/2024

Trade name: Vibra-TITE® Threadlocker

(Contd. of page 6)

| | | |
|---|--------------|--------|
| - 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) | | |
| CAS: 98-82-8 | Cumene | D, CBD |
| CAS: 98-86-2 | acetophenone | D |
| - TLV (Threshold Limit Value) | | |
| CAS: 79-10-7 | acrylic acid | 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 | 2 | Health = *2 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

- NFPA ratings (scale 0 - 4)

| | | | |
|---|---|---|----------------|
| 2 | 1 | 0 | Health = 2 |
| | | | Fire = 1 |
| | | | Reactivity = 0 |

- Date of preparation / last revision 01/23/2024

- 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

Explosives 1.3: Explosives – Division 1.3

Flammable Liquids 4: Flammable liquids – Category 4

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

Organic Peroxides - Type E: Organic peroxides – Type E/F

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Acute Toxicity - Inhalation 3: Acute toxicity – Category 3

Skin Corrosion 1B: Skin corrosion/irritation – Category 1B

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Sensitization - Skin 1: Skin sensitisation – Category 1

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2

Aspiration Hazard 1: Aspiration hazard – Category 1

- * Data compared to the previous version altered.

- Disclaimer

The information set forth is based on information that ND Industries, Inc. 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.

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 09/15/2023

1 Identification

- Product identifier

- **Trade name:** DriveGrip®
- **Synonyms:** 470 DriveGrip® Anti Cam-Out Fluid
- **Part number:** VT470
- **Application of the substance / the mixture** Assembly adhesive

- 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** The product is not classified, according to the Globally Harmonized System (GHS).

- Label elements

- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void

- 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: 409-21-2 | silicon carbide | Carcinogenicity 1B, H350 | 20 – 29% |
| CAS: 11138-66-2 | Gum xanthan | Combustible Dust | 1 – 4% |
| CAS: 9002-89-5 | Intermediate copolymer | Eye Irritation 2B, H320; Combustible Dust | 1 – 4% |

4 First-aid measures

- Description of first aid measures

- **General information:** No special measures required.
- **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.
- **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.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 09/15/2023

Trade name: DriveGrip®

(Contd. of page 1)

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **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:** None.
- **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 constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 - At this time, the other constituents have no known exposure limits.

CAS: 409-21-2 silicon carbide

| | |
|-----|--|
| PEL | Long-term value: 15* 5** mg/m ³ fibrous dust: *total dust **respirable fraction |
| REL | Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction |
| TLV | Long-term value: 10* 3** mg/m ³ fibrous dust:0.1 f/cc A2, nonfibrous:*inh.,**resp. |

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

- Exposure controls

- **Personal protective equipment:**
 - **General protective and hygienic measures:** Immediately remove all soiled and contaminated clothing.
 - **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

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 09/15/2023

Trade name: DriveGrip®

(Contd. of page 2)

- 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: Not required.**- Body protection:** Protective work clothing

9 Physical and chemical properties

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

Viscous

- Color:

Dark grey

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

≥ 100 °C (≥ 212 °F)

- Flash point:

≥ 100 °C (≥ 212 °F)

- 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 20 °C (68 °F):

≤ 23 hPa (≤ 17.3 mm Hg)

- Density at 20 °C (68 °F):~ 1.62191 g/cm³ (~ 13.53484 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 at 20 °C (68 °F):**

215,000 – 400,00 mPas

- Kinematic:

Not determined.

- Solvent content:**- Water:**

65.8 %

- VOC content:

0.00 %

0.0 g/l / 0.00 lb/gal

- Solids content:

34.2 %

- 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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 09/15/2023

Trade name: DriveGrip®

(Contd. of page 3)

- 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:

CAS: 9002-89-5 Intermediate copolymer

Oral LD50 > 5,000 mg/kg (rat)

- Primary irritant effect:

- **on the skin:** No irritant effect.

- **on the eye:** No 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:

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Irritant

- Carcinogenic categories

- IARC (International Agency for Research on Cancer)

CAS: 409-21-2 silicon carbide

2A

CAS: 9002-89-5 Intermediate copolymer

3

- 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.

13 Disposal considerations

- Waste treatment methods

- **Recommendation:** Smaller quantities can be disposed of with household waste.

- 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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 09/15/2023

Trade name: DriveGrip®

(Contd. of page 4)

| | |
|--|-----------------|
| - Packing group - DOT, 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: 3251-23-8 | copper dinitrate

- TSCA (Toxic Substances Control Act):

All components have the value 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: 409-21-2 | silicon carbide

A2

CAS: 107-22-2 | glyoxal

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 | 0 | Health = *0 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

- NFPA ratings (scale 0 - 4)

| | | | |
|---|---|---|----------------|
| 0 | 1 | 0 | Health = 0 |
| | | | Fire = 1 |
| | | | Reactivity = 0 |

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 09/15/2023

Trade name: DriveGrip®

(Contd. of page 5)

- **Date of preparation / last revision** 01/23/2024

- **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
Eye Irritation 2B: Serious eye damage/eye irritation – Category 2B
Carcinogenicity 1B: Carcinogenicity – Category 1B

- * **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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Safety Data Sheet
acc. to OSHA HCS

Printing date 01/23/2024

Reviewed on 01/19/2024

1 Identification

- Product identifier

- **Trade name:** Vibra-TITE® Threadlocker
- **Synonyms:** 150 Medium Strength Wicking Grade Threadlocker
- **Part number:** VT150
- **Application of the substance / the mixture** Thread Locking

- 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

Carcinogenicity 2 H351 Suspected of causing cancer.
Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irritation 2 H315 Causes skin irritation.
Eye Irritation 2A H319 Causes serious eye irritation.
Sensitization - Skin 1 H317 May cause an allergic skin reaction.
Specific Target Organ Toxicity - Single Exposure 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



GHS07 GHS08

- **Signal word** Warning

- Hazard-determining components of labeling:

2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate
methacrylic acid, monoester with propane-1,2-diol
dimethylbenzyl hydroperoxide
Cumene
Modified Epoxy Acrylate Oligomer
2'-phenylacetohydrazide

- Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

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- Precautionary statements

| | |
|----------------|--|
| P201 | Obtain special instructions before use. |
| P260 | Do not breathe 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. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| P312 | Call a poison center/doctor if you feel unwell. |
| P314 | Get medical advice/attention 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. |
| P321 | Specific treatment (see on this label). |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P363 | Wash contaminated clothing before reuse. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

- 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: 25852-47-5 | 2-(2-methylprop-2-enoyloxy)ethyl 2-methylprop-2-enoate Skin Irritation 2, H315; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335 | 70 – 79% |
| CAS: 27813-02-1 | methacrylic acid, monoester with propane-1,2-diol Eye Irritation 2A, H319; Sensitization - Skin 1, H317 | 10 – 19% |
| | Modified Epoxy Acrylate Oligomer Explosives 1.3, H203; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317 | 1 – 4% |
| CAS: 80-15-9 | dimethylbenzyl hydroperoxide Self-reactive substances and mixtures - Type F, H242; Organic Peroxides - Type E, H242; Acute Toxicity - Inhalation 3, H331; Specific Target Organ Toxicity - Repeated Exposure 2, H373; Aspiration Hazard 1, H304; Skin Corrosion 1B, H314; Eye Damage 1, H318; Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227 | 1 – 4% |
| CAS: 114-83-0 | 2'-phenylacetohydrazide Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |
| CAS: 98-82-8 | Cumene Flammable Liquids 3, H226; Carcinogenicity 2, H351; Aspiration Hazard 1, H304; Acute Toxicity - Oral 4, H302; Specific Target Organ Toxicity - Single Exposure 3, H335 | ≤ 1% |

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.

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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:**
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).
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.
No special precautions are necessary if used correctly.
 - **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.
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 section 7.
- **Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
At this time, the other constituents have no known exposure limits.

CAS: 80-15-9 dimethylbenzyl hydroperoxide

| | |
|------|--|
| WEEL | Long-term value: 6 mg/m ³ , 1 ppm Skin |
|------|--|

CAS: 98-82-8 Cumene

| | |
|-----|---|
| PEL | Long-term value: 245 mg/m ³ , 50 ppm Skin |
|-----|---|

| | |
|-----|---|
| REL | Long-term value: 245 mg/m ³ , 50 ppm Skin |
|-----|---|

| | |
|-----|------------------------------|
| TLV | Long-term value: 5 ppm 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.

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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:

Not required.

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: 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:**

Fluid

- Color:

Green

- Odor:

Characteristic

- Odor threshold:

Not determined.

- pH-value:

Not determined.

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

Undetermined.

- Boiling point/Boiling range:

≥ 200 °C (≥ 392 °F)

- Flash point:

95 °C (203 °F)

- 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 20 °C (68 °F):

≤ 0.1 hPa

- 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:**

0.8 %

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| | |
|----------------------------|--|
| - Water: | 1.3 % |
| - VOC content: | 0.80 % 8.0 g/l / 0.07 lb/gal |
| - Solids content: | 77.5 % |
| - 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:**
 - Aldehyde
 - Hydrocarbons

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

| | | |
|------------|----------|--------------------|
| Oral | LD50 | 22,738 mg/kg (rat) |
| Dermal | LD50 | 29,762 mg/kg (rat) |
| Inhalative | LC50/4 h | 13,095 mg/l (rat) |

CAS: 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) |

CAS: 114-83-0 2'-phenylacetohydrazide

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

CAS: 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:** 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: 98-82-8 | Cumene | 2B |
| CAS: 91-20-3 | naphthalene | 2B |
| CAS: 1330-20-7 | Mixed Xylenes | 3 |
| CAS: 100-41-4 | ethylbenzene | 2B |

- NTP (National Toxicology Program)

| | | |
|---------------|--------------------|---|
| CAS: 98-82-8 | Cumene | R |
| CAS: 130-15-4 | 1,4-naphthoquinone | R |
| CAS: 91-20-3 | naphthalene | 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:** Harmful to fish
- **Additional ecological information:**
 - **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

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

14 Transport information

| | |
|--|-----------------|
| - 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: | |
| - 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: 80-15-9 | dimethylbenzyl hydroperoxide |
| CAS: 98-82-8 | Cumene |
| CAS: 91-20-3 | naphthalene |
| CAS: 1330-20-7 | Mixed Xylenes |
| CAS: 100-41-4 | ethylbenzene |

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| | | |
|---|--------------------|--------|
| - TSCA (Toxic Substances Control Act): | | |
| All components have the value ACTIVE. | | |
| - Hazardous Air Pollutants | | |
| CAS: 98-82-8 | Cumene | |
| CAS: 130-15-4 | 1,4-naphthoquinone | |
| CAS: 91-20-3 | naphthalene | |
| CAS: 1330-20-7 | Mixed Xylenes | |
| CAS: 100-41-4 | ethylbenzene | |
| - Proposition 65 | | |
| - Chemicals known to cause cancer: | | |
| CAS: 98-82-8 | Cumene | |
| CAS: 91-20-3 | naphthalene | |
| CAS: 100-41-4 | ethylbenzene | |
| - 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) | | |
| CAS: 98-82-8 | Cumene | D, CBD |
| CAS: 91-20-3 | naphthalene | C, CBD |
| CAS: 1330-20-7 | Mixed Xylenes | I |
| CAS: 100-41-4 | ethylbenzene | D |
| - TLV (Threshold Limit Value) | | |
| CAS: 91-20-3 | naphthalene | A4 |
| CAS: 1330-20-7 | Mixed Xylenes | A4 |
| CAS: 100-41-4 | ethylbenzene | A3 |
| - 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 | 2 | Health = *2 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |

- NFPA ratings (scale 0 - 4)

| | |
|---|----------------|
| 1 | Health = 2 |
| 1 | Fire = 1 |
| 0 | Reactivity = 0 |

- Date of preparation / last revision 01/23/2024

- 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

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vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Explosives 1.3: Explosives – Division 1.3
 Flammable Liquids 3: Flammable liquids – Category 3
 Flammable Liquids 4: Flammable liquids – Category 4
 Self-reactive substances and mixtures - Type F: Self-reactive substances and mixtures – Type E/F
 Organic Peroxides - Type E: Organic peroxides – Type E/F
 Acute Toxicity - Oral 4: Acute toxicity – Category 4
 Acute Toxicity - Inhalation 3: Acute toxicity – Category 3
 Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
 Skin Irritation 2: Skin corrosion/irritation – Category 2
 Eye Damage 1: Serious eye damage/eye irritation – Category 1
 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
 Sensitization - Skin 1: Skin sensitisation – Category 1
 Carcinogenicity 2: Carcinogenicity – Category 2
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
 Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2
 Aspiration Hazard 1: Aspiration hazard – Category 1

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

- **Disclaimer**

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