Safety Data Sheet
acc. to OSHA HCS

Printing date 04/17/2024 *Reviewed on 04/12/2024*

1 Identification

- ***Product identifier***
  - ***Trade name:*** Vibra-TITE® Thermal Defender®
    - ***Synonyms:*** Thermal Defender® 97
    - ***Part number:*** TD97, VT970
    - ***Application of the substance / the mixture*** Protective coating
- ***Details of the supplier of the safety data sheet***
  - ***Manufacturer/Supplier:***
    ND Industries, Inc
    1000 North Crooks Road
    Clawson, MI 48017
    USA
    Telephone: +1-248-288-0000
    Email: info@ndindustries.com
    Website: www.ndindustries.com
  - ***Information department:*** Product Safety Department
  - ***Emergency telephone number:***
    United States: 1-800-424-9300
    International: +1-703-527-3887

2 Hazard(s) identification

- ***Classification of the substance or mixture***


GHS02 Flame

Flammable Aerosols 1	H222 Extremely flammable aerosol.


GHS07

Eye Irritation 2A	H319 Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure 3	H336 May cause drowsiness or dizziness.

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


GHS02 GHS07

    - ***Signal word*** Danger
    - ***Hazard-determining components of labeling:***
      acetone
    - ***Hazard statements***
      H222 Extremely flammable aerosol.
      H319 Causes serious eye irritation.
      H336 May cause drowsiness or dizziness.
    - ***Precautionary statements***

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
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.
P312	Call a poison center/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.

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P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
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: 67-64-1	acetone Flammable Liquids 2, H225; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H336	70 – 79%
CAS: 9004-36-8	Cellulose Acetate Butyrate Combustible Dust	1 – 4%

4 First-aid measures

- ***Description of first aid measures***
  - ***After inhalation:*** Supply fresh air; consult doctor in case of complaints.
  - ***After skin contact:*** Generally the product does not irritate the skin.
  - ***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:***
    CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - ***For safety reasons unsuitable extinguishing agents:*** Water
- ***Special hazards arising from the substance or mixture*** No further relevant information available.
- ***Advice for firefighters***
  - ***Protective equipment:***
    Wear self-contained respiratory protective device.
    Wear fully protective suit.

6 Accidental release measures

- ***Personal precautions, protective equipment and emergency procedures***
  Wear protective equipment. Keep unprotected persons away.
  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.
  Do not flush with water or aqueous cleansing agents
  Dispose of the collected material according to regulations.
- ***Reference to other sections***
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- ***Handling:***
  - ***Precautions for safe handling***
    Ensure good ventilation/exhaustion at the workplace.
    Open and handle receptacle with care.
  - ***Information about protection against explosions and fires:***
    Do not spray on a naked flame or any incandescent material.
    Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

- ***Conditions for safe storage, including any incompatibilities***
  - ***Storage:***
    - ***Requirements to be met by storerooms and receptacles:***
      Observe official regulations on storing packagings with pressurized containers.
    - ***Information about storage in one common storage facility:*** Not required.
    - ***Further information about storage conditions:***
      Keep receptacle tightly sealed.
      Do not gas tight seal receptacle.
      Protect from heat and direct sunlight.
- ***Specific end use(s)*** No further relevant information available.

8 Exposure controls/personal protection

- ***Additional information about design of technical systems:*** No further data; see 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 remaining constituent has no known exposure limits.

CAS: 67-64-1 acetone	
PEL	Long-term value: 2400 mg/m³, 1000 ppm
REL	Long-term value: 590 mg/m³, 250 ppm
TLV	Short-term value: 500 ppm Long-term value: 250 ppm A4, BEI

- ***Ingredients with biological limit values:***

CAS: 67-64-1 acetone	
BEI	25 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

- ***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.
      Avoid contact with the eyes and skin.
    - ***Breathing equipment:***
      In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
    - ***Protection of hands:***
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
      - ***Material of gloves***
        The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
        Nitrile rubber, NBR
      - ***Penetration time of glove material***
        The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - ***Body protection:*** Protective work clothing

*
9 Physical and chemical properties

- ***Information on basic physical and chemical properties***
  - ***General Information***
    - ***Appearance:***
      - ***Form:*** Suspension
      - ***Color:*** Grey
    - ***Odor:*** Acetone-like

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- ***Odor threshold:***	Not determined.
- ***pH-value:***	Not determined.
- ***Change in condition***	
- ***Melting point/Melting range:***	Undetermined.
- ***Boiling point/Boiling range:***	≥ 55.8 – ≤ 56.6 °C (≥ 132.4 – ≤ 133.9 °F)
- ***Flash point:***	-17 °C (1.4 °F)
- ***Flammability (solid, gaseous):***	Not applicable.
- ***Auto igniting:***	465 °C (869 °F)
- ***Decomposition temperature:***	Not determined.
- ***Ignition temperature:***	Product is not selfigniting.
- ***Danger of explosion:***	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- ***Explosion limits:***	
- ***Lower:***	2.6 Vol %
- ***Upper:***	13 Vol %
- ***Vapor pressure at 20 °C (68 °F):***	≤ 233 hPa (≤ 174.8 mm Hg)
- ***Vapor pressure at 50 °C (122 °F):***	≤ 800 hPa (≤ 600 mm Hg)
- ***Density at 20 °C (68 °F):***	> 1.11124 g/cm³ (> 9.2733 lbs/gal)
- ***Relative density***	Not determined.
- ***Vapor density***	Not determined.
- ***Evaporation rate***	Not applicable.
- ***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:***	75.6 %
- ***VOC content:***	0.00 % 0.0 g/l / 0.00 lb/gal
- ***Solids content:***	24.4 %
- ***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:*** No dangerous decomposition products known.

11 Toxicological information

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

- ***LD/LC50 values that are relevant for classification:***		
CAS: 67-64-1 acetone		
Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)
CAS: 9004-36-8 Cellulose Acetate Butyrate		
Oral	LD50	> 6,400 mg/kg (rabbit)
Dermal	LD50	> 1,000 mg/kg (rabbit)

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- ***Primary irritant effect:***
  - ***on the skin:*** No irritant effect.
  - ***on the eye:*** Irritating effect.
- ***Sensitization:*** No sensitizing effects known.
- ***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)***
None of the ingredients is listed.

- ***NTP (National Toxicology Program)***
None of the ingredients is listed.

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

12 Ecological information

- ***Toxicity***
  - ***Aquatic toxicity:*** No further relevant information available.
- ***Persistence and degradability*** No further relevant information available.
- ***Behavior in environmental systems:***
  - ***Bioaccumulative potential*** No further relevant information available.
  - ***Mobility in soil*** No further relevant information available.
- ***Additional ecological information:***
  - ***General notes:***
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- ***Results of PBT and vPvB assessment***
  - ***PBT:*** Not applicable.
  - ***vPvB:*** Not applicable.
- ***Other adverse effects*** No further relevant information available.

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***	UN1950
- ***UN proper shipping name***	
- ***DOT***	Aerosols, flammable
- ***IMDG***	AEROSOLS
- ***IATA***	AEROSOLS, flammable
- ***Transport hazard class(es)***	
- ***DOT***	

- ***Class***	2.1 Gases
- ***Label***	2.1
- ***IMDG, IATA***	

- ***Class***	2.1 Gases

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- ***Label***	2.1
- ***Packing group***	
- ***DOT, IMDG, IATA***	not regulated
- ***Environmental hazards:***	
- ***Marine pollutant:***	No
- ***Special precautions for user***	Warning: Gases
- ***Hazard identification number (Kemler code):***	-
- ***EMS Number:***	F-D,S-U
- ***Stowage Code***	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
- ***Segregation Code***	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
- ***Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code***	Not applicable.
- ***Transport/Additional information:***	
- ***DOT***	
- ***Quantity limitations***	On passenger aircraft/rail: 75 kg On cargo aircraft only: 150 kg
- ***IMDG***	
- ***Limited quantities (LQ)***	1L
- ***Excepted quantities (EQ)***	Code: E0 Not permitted as Excepted Quantity
- ***UN "Model Regulation":***	UN 1950 AEROSOLS, 2.1

15 Regulatory information

- ***Safety, health and environmental regulations/legislation specific for the substance or mixture***
No further relevant information available.

- ***Sara***

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

None of the ingredients is listed.

- ***Section 313 (Specific toxic chemical listings):***

None of the ingredients is listed.

- ***TSCA (Toxic Substances Control Act):***

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)***

CAS: 67-64-1	acetone	I

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CAS: 10043-11-5	Boron nitride	I (oral)

- ***TLV (Threshold Limit Value)***

CAS: 67-64-1	acetone	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 Affaires
- ***Contact:*** Safety, Health and Environmental Affaires
- ***Classification System:***
  - ***HMIS-ratings (scale 0 - 4)***

Health = 2
Fire = 4
Reactivity = 3

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

Health = 2
Fire = 4
Reactivity = 0

  - ***Date of preparation / last revision*** 04/17/2024
  - ***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
BEI: Biological Exposure Limit
Flammable Aerosols 1: Aerosols – Category 1
Flammable Liquids 2: Flammable liquids – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

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

- ***Disclaimer***

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