

**Safety Data Sheet**  
according to HPR, Schedule 1

Printing date 04/25/2024

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 identification**

**- Classification of the substance or mixture**



GHS02 Flame

Flammable Aerosols - Category 1

H222-H229 Extremely flammable aerosol. Pressurized container: may burst if heated.



GHS07

Eye Irritation - Category 2A

H319

Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure - Category 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-H229 Extremely flammable aerosol.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

**- Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Do not pierce or burn, even after use.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/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.

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P337+P313	If eye irritation persists: Get medical advice/attention.
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.

### 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	60 – 80% w/w
	Flammable Liquids - Category 2, H225; Eye Irritation - Category 2A, H319; Specific Target Organ Toxicity - Single Exposure - Category 3, H336	
CAS: 9004-36-8	Cellulose Acetate Butyrate	1 – 5% w/w
	Combustible Dusts - Category 1	

### 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<sub>2</sub>, 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.  
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.

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**- 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:**

**CAS: 67-64-1 acetone**

EL (Canada) STEL: 500 ppm  
TWA: 250 ppm

EV (Canada) STEL: 750 ppm  
TWA: 500 ppm

PEL (USA) TWA: 2400 mg/m<sup>3</sup>, 1000 ppm

REL (USA) TWA: 590 mg/m<sup>3</sup>, 250 ppm

TLV (USA) STEL: 500 ppm  
TWA: 250 ppm  
A4, BEI

**- Ingredients with biological limit values:**

**CAS: 67-64-1 acetone**

BEI (USA) 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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- <b>Odor threshold:</b>	Not determined.
- <b>pH-value:</b>	Not determined.
- <b>Change in condition</b>	
- <b>Melting point/Melting range:</b>	Undetermined.
- <b>Boiling point/Boiling range:</b>	≥ 55.8 – ≤ 56.6 °C
- <b>Flash point:</b>	-17 °C
- <b>Flammability (solid, gaseous):</b>	Not applicable.
- <b>Auto igniting:</b>	465 °C
- <b>Decomposition temperature:</b>	Not determined.
- <b>Ignition temperature:</b>	Product is not selfigniting.
- <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- <b>Explosion limits:</b>	
- <b>Lower:</b>	2.6 Vol %
- <b>Upper:</b>	13 Vol %
- <b>Vapor pressure at 20 °C:</b>	≤ 233 hPa
- <b>Vapor pressure at 50 °C:</b>	≤ 800 hPa
- <b>Density at 20 °C:</b>	> 1.11124 g/cm <sup>3</sup>
- <b>Relative density</b>	Not determined.
- <b>Vapor density</b>	Not determined.
- <b>Evaporation rate</b>	Not applicable.
- <b>Solubility in / Miscibility with</b>	
- <b>Water:</b>	Not miscible or difficult to mix.
- <b>Partition coefficient (n-octanol/water):</b>	Not determined.
- <b>Viscosity:</b>	
- <b>Dynamic:</b>	Not determined.
- <b>Kinematic:</b>	Not determined.
- <b>Solvent content:</b>	
- <b>Organic solvents:</b>	75.6 %
- <b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
- <b>Solids content:</b>	24.4 %
- <b>Other information</b>	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:**

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

## 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

- <b>UN-Number</b>	
- <b>DOT/TDG, ADR, IMDG, IATA</b>	UN1950
- <b>UN proper shipping name</b>	
- <b>DOT/TDG</b>	Aerosols, flammable
- <b>ADR</b>	UN1950 Aerosols
- <b>IMDG</b>	AEROSOLS
- <b>IATA</b>	AEROSOLS, flammable
- <b>Transport hazard class(es)</b>	
- <b>DOT/TDG (Transport dangerous goods):</b>	
	
- <b>Class</b>	2.1 Gases
- <b>Label</b>	2.1
- <b>ADR</b>	
	
- <b>Class</b>	2 5F Gases

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- Label	2.1
- IMDG, IATA	
	
- Class	2.1 Gases
- Label	2.1
- Packing group	
- DOT/TDG, ADR, 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/TDG	
- Quantity limitations	On passenger aircraft/rail: 75 kg On cargo aircraft only: 150 kg
- ADR	
- Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
- 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.

##### - Canadian substance listings:

##### - Canadian Domestic Substances List (DSL)

All ingredients are listed.

##### - Canadian Non-Domestic Substances List (NDSL)

None of the ingredients is listed.

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<b>- Canadian Ingredient Disclosure list (limit 0.1%)</b>
None of the ingredients is listed.
<b>- Canadian Ingredient Disclosure list (limit 1%)</b>
CAS: 67-64-1   acetone
<b>- Chemical safety assessment:</b> 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	4	Fire = 4
REACTIVITY	3	Reactivity = 3

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

2	4	0	Health = 2
			Fire = 4
			Reactivity = 0

- **Date of the latest revision of the safety data sheet** 04/25/2024

- **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 VOC: Volatile Organic Compounds (USA, EU)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative

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

- **Disclaimer**

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