VITAL DEFENSE® Company

SAFETY DATA SHEET

Issue Date November 2016
Revision Date April 2019 **Version** 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Vital Defense®-D

Note: After dilution, please reference ProSpray™ Ready-to-Use Safety Data Sheet for warning and precautions. Available online at: www.Certol.com/ProSpray

Other Means of Identification

SDS # VIT/SDS/I03
UN/ID No. UN1993
Product Code VIT

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Concentrated Surface Disinfectant, Cleaning and Holding Solution

Details of the Supplier of the Safety Data Sheet

Supplier Address
VITAL DEFENSE® Company
6120 East 58th Avenue
Commerce City, Colorado 80022
www.Certol.com
Phone: 303-799-9401
Toll-Free: 1-800-843-3343
Fax: 303-799-9408

24 Hour Emergency Telephone
INFOTRAC: 1-800-535-5053 (North America)
INFOTRAC: 1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Classification

Serious Eye Damage / Eye Irritation	Category 1
Skin Corrosion / Irritation	Category 2
Specific Target Organ Toxicity (Single Exposure)	Category 3
Flammable Liquids	Category 3
Acute Toxicity - Inhalation (Vapors)	Category 4
Acute Toxicity - Oral	Category 4

Signal Word Danger.

Physical & Chemical Hazards: Flammable liquid and vapors.

Health Hazards: Harmful if inhaled, swallowed. Causes skin inrritation and serious eye damage. May cause respiratory irritation, drowsiness, or dizziness.

Environmental Hazards: See section 12.

GHS Label Element

Hazard Statements

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Precautionary Statements:

Prevention	P201	Obtain special instructions before use.
	P210	Keep away from heat/sparks/open flames/hot surfaces.
	P233	Keep container tightly closed.
	P243	Take action to prevent static discharge.
	P260	Do not breathe dust/fumes/gas/mist/vapors/spray.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves, protective clothing, eye protection and face protection.
Response	P314	Get medical advice/attention if you feel unwell.
	P370	In case of fire, use CO_2, dry chemical or alcohol resistant foam to extinguish.
Storage	P403	Store in a well-ventilated place.
	P411	Store at temperatures not exceeding 80°F (27°C) or below 45°F (7°C).
Disposal	P501	Dispose according to all local, state and federal regulations.

Hazard(s) not otherwise classified (HNOC): Not determined.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
o-phenylphenol	90-43-7	9
o-benzyl-p-chlorophenol	120-32-1	1
Isopropyl Alcohol	67-63-0	26
Ethylenediaminetetraacetic acid (EDTA)	60-00-4	*
Benzenesulfonic Acid	68584-22-5	*
Potassium Hydroxide	1310-58-3	*

* The exact percentage is a trade secret.

4. FIRST AID MEASURES

Inhalation Move to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Consult a physician.

Eye Contact Immediately flush with plenty of water. Remove any contact lenses, continue flushing for several minutes and call a physician immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to a person who is unconscious. Call a physician or Poison Control Center.

Skin Contact Wash off immediately with plenty of water for several minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Symptoms Skin contact can lead to drying, itching, stinging and irritation. Exposed individuals may experience eye tearing, redness, corneal injury and/or burns. Inhalation may cause respiratory tract irritation. Ingestion may cause burning of the mouth, throat and digestive tract.

Note to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use CO_2, dry chemical or alcohol resistant foam to extinguish.

Unsuitable Extinguishing Media Not Determined.

Specific Hazards Arising from the Chemical None Determined.

Hazardous Combustion Products Phenolic compounds, carbon monoxide and toxic fumes of chlorine and chlorides may be emitted.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions — Use personal protective equipment as recommended. The wet, contaminated surface may be slippery.

For Emergency Responders — Restrict access to spill area. Ventilate the area.

Environmental Precautions — Prevent entry into waterways, sewers, basements or confined areas.

Methods and Material for Containment and Cleaning Up

Methods for Containment — Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up — Use a non-combustible material like vermiculite, sand or clay to soak up. Place into a container for later disposal. Dispose according to all local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling — Handle in accordance with good industrial hygiene and safety practices.

Wash face, hands and any exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Do not breathe dust/fumes/gas/mist/vapors/spray.

Keep cool.

Keep out of reach of children and pets.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions — Store in a closed container in a cool, dry, well-ventilated place away from incompatible materials. Do not store below 45°F (7°C) or above 80°F (27°C).

Incompatible Materials — Acids and oxidizing agents.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl Alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m^3 TWA: 400 ppm (Vacated) TWA: 980 mg/m^3 (Vacated) STEL: 500 ppm (Vacated) STEL: 1225 mg/m^3 (Vacated)	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m^3 STEL: 500 ppm STEL: 1225 mg/m^3
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m^3	Ceiling: 2 mg/m^3 (Vacated)	Ceiling: 2 mg/m^3

Eye/Face Protection — Wear goggles, chemical safety glasses or a face protection shield.

Exposure Guidelines — See above occupational exposure limits.

Appropriate Engineering Controls — Eyewash stations and showers.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection — Wear goggles, chemical safety glasses or a face protection shield.

Skin and Body Protection — Chemical resistant, non-latex and impermeable gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory Protection — Under normal conditions a respirator is not normally required. A mask or respirator may be used if vapor concentration is high.

General Hygiene Considerations — Handle in accordance with good industrial hygiene and safety practices. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	**Appearance**	Natural Colored Liquid	**Color**	Natural Color	**Odor**	Alcohol, Phenol & Lemon

Property	Values	Property	Values
pH	9.5 - 10.5 (77°F/25°C)	**Specific Gravity**	0.997 (60°F/15.5°C)
Melting Point / Freezing Point	<32°F / < 0°C	**Water Solubility**	Completely Soluble
Boiling Point / Boiling Range	188°F / 87°C	**Partition Coefficient**	Not Determined.
Flash Point	80°F / 27°C	**Autoignition Temperature**	Not Determined.
Evaporation Rate	<1	**Decomposition Temperature**	Not Determined.
Flammability (Solid/Gas)	N/A-Liquid	**Kinematic Viscosity**	Not Determined.
Flammability Limits In Air	Not Determined.	**Dynamic Viscosity**	Not Determined.
Vapor Pressure	Not Determined.	**Explosive Properties**	Not Determined.
Vapor Density	>1	**Oxidizing Properties**	Not Determined.

10. STABILITY AND REACTIVITY

Reactivity Not reactive under normal conditions.

Chemical Stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization will not occur.

Conditions to Avoid Avoid direct sunlight. Avoid temperatures below 45°F (7°C) and above 80°F (27°C).

Incompatible Materials Acids and oxidizing agents.

Hazardous Decomposition Products Combustion products may include phenolic compounds, carbon monoxide and toxic fumes of chlorine and chlorides.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure Eye. Skin Contact. Inhalation. Ingestion.

Information on Likely Routes of Exposure

Ingestion May be harmful if swallowed.

Inhalation Harmful if inhaled.

Skin Contact Causes skin irritation.

Eye Contact Causes serious eye damage.

Component Information

Chemical Name	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Isopropyl Alcohol 67-63-0	5840 mg/kg (Rat)	>12800 mg/kg (Rat)	>10,000 ppm (Rat) 6 hrs
o-benzyl-p-chlorophenol 120-32-1	>2500 mg/kg (Rat)	>5000 mg/kg (Rat)	2500 mg/m^3 (Rat) 4 hrs
o-phenylphenol 90-43-7	2980 mg/kg (Rat)	>5000 mg/kg (Rat)	>36 mg/m^3 (Rat) 4 hrs
Potassium Hydroxide 1310-58-3	214 mg/kg (Rat)	N/A	N/A
Benzenesulfonic Acid 68584-22-15	N/A	N/A	33920 mg/L (Rat)

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity The product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl Alcohol 67-63-0	A4	Group 3	N/A	N/A
o-phenylphenol 90-43-7	N/A	Group 3	N/A	N/A

ACGIH (The American Conference of Governmental Industrial Hygienists)
A4 - Not Classifiable as a Human Carcinogen.

IARC (International Agency for Research on Cancer)
Group 3 - Not Carcinogenic to Humans.

Numerical Measures of Toxicity Not Determined.

12. ECOLOGICAL INFORMATION

Ecotoxicity An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl Alcohol 67-63-0	Known Toxin	Known Toxin	No Information	Known Toxin
o-benzyl-p-chlorophenol 120-32-1	Known Toxin	Known Toxin	Known Toxin	Known Toxin
o-phenylphenol 90-43-7	Known Toxin	Known Toxin	Known Toxin	Known Toxin
Benzenesulfonic Acid 68584-22-15	No Information	No Information	No Information	Known Toxin

Persistence and Degradability Not Determined.

Bioaccumulation Not Determined.

Mobility

Chemical Name	Partition Coefficient
Isopropyl Alcohol 67-63-0	1.1
o-phenylphenol 90-43-7	3.09

Other Adverse Effects Not Determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Dispose according to all local, state and federal regulations.

Contaminated Packaging Dispose according to all local, state and federal regulations.

Chemical Name	California Hazardous Waste Status
Isopropyl Alcohol 67-63-0	Toxic/Ignitable
Potassium Hydroxide 1310-58-3	Toxic/Corrosive

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT	**UN/ID No.**	UN1993
	Proper Shipping Name	Flammable Liquid, n.o.s (Contains Isopropyl Alcohol)
	Hazard Class	3
	Packing Group	III
IATA	**UN/ID No.**	UN1993
	Proper Shipping Name	Flammable Liquid, n.o.s (Contains Isopropyl Alcohol)
	Hazard Class	3
	Packing Group	III
IMDG	**UN/ID No.**	UN1993
	Proper Shipping Name	Flammable Liquid, n.o.s (Contains Isopropyl Alcohol)
	Hazard Class	3
	Packing Group	III

15. REGULATORY INFORMATION

International Inventories Not Determined.

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*
EINECS/ELINCS *- European Inventory of Existing Chemical Substances/ European List of Notified Chemical Substances*
ENCS *- Japan Existing and New Chemical Substances*
IECSC *- China Inventory of Existing Chemical Substances*
KECL *- Korean Existing and Evaluated Chemical Substances*
PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

Comprehensive Environmental Response Compensation Liability Act of 1980 (CERCLA)

Chemical Name	Hazardous Substances RQs	CERCLA / SARA RQ	Reportable Quantity (RQ)
Potassium Hydroxide 1310-58-3	1000 lb.	N/A	RQ 1000 lb. final RQ RQ 454 kg final RQ
Benzenesulfonic Acid 68584-22-15	1000 lb.	N/A	RQ 1000 lb. final RQ RQ 454 kg final RQ
Ethylene Diaminetetraacetic Acid (EDTA) 60-00-4	5000 lb.	N/A	RQ 5000 lb. final RQ RQ 2270 kg final RQ

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III. Section 313.

SARA 311/312 Hazard Categories

Chemical Name	CAS No	Weight %	SARA 313 - Threshold Values %
Isopropyl Alcohol	67-63-0	26%	1.0%
o-phenylphenol	90-43-7	9%	1.0%
o-benzyl-p-chlorophenol	120-32-1	1%	0.1%

Clean Water Act (CWA)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium Hydroxide 1310-58-3	1000 lb.	N/A	N/A	X
Benzenesulfonic Acid 68584-22-15	1000 lb.	N/A	N/A	X
Ethylene Diaminetetraacetic Acid (EDTA) 60-00-4	5000 lb.	N/A	N/A	X

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
o-phenylphenol 90-43-7	See Note Below

NOTE: In a letter dated September 10, 2008, from Lanxess, Certol International, LLC's Supplier of 2-phenylphenol (OPP), Lanxess Stated: "As none of the organizations/programs below have 2-phenylphenol (OPP) listed as a carcinogen, we do not see the legal authority to have 2-phenylphenol (OPP) listed under Proposition 65 in the State of California. National Toxicology Program (NTP); International Agency for Research on Cancer (IARC); Occupational Safety and Health Administration (OSHA); Environmental Protection Agency (EPA)."

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Isopropyl Alcohol 67-63-0	X	X	X
o-phenylphenol 90-43-7	X	X	X
Potassium Hydroxide 1310-58-3	X	X	X
Benzenesulfonic Acid 68584-22-15	X	X	X
Ethylene Diaminetetraacetic Acid (EDTA) 60-00-4	X	X	X
o-benzyl-p-chlorophenol 120-32-1	X	N/A	X

16. OTHER INFORMATION

NFPA

Health Hazards	Flammability	Instability	Special Hazards
2	1	0	Not Determined.

HMIS

Health Hazards	Flammability	Physical Hazards	Personal Protection
Not Determined.	Not Determined.	Not Determined.	Not Determined.

Issue Date November 2016.

Revision Date April 2019.

Revision Note

Disclaimer

This Safety Data Sheet was prepared to comply with the current OSHA hazard Communication Standard adoption of the Globally Harmonized System of Classifcation and Labeling of Chemicals (GHS). Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the satefy and heatlh of employees.

End of Safety Data Sheet