

Issue Date October 2011

Revision Date September 2013

Version 1

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 warnings & precautions. Available online at: www.Certol.com/ProSpray

Other Means of Identification

SDS # VIT/SDS/I01

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.VitalDefense.com

Emergency Telephone Number

Company Phone Number(s)
 Toll-Free: 1-800-218-2002
 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

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

Signal Word Danger.

2. HAZARDS IDENTIFICATION (continued)

Hazard Statements

- Harmful if swallowed.
- Causes skin irritation.
- Causes serious eye damage.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
- Flammable liquid and vapor.

Appearance Natural Colored Liquid.

Physical State Liquid.

Odor Alcohol, Phenol and Lemon.



Precautionary Statements-Prevention

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Wear protective gloves, protective clothing, eye protection and face protection.
- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Do not breathe dust/fumes/gas/mist/vapors/spray.
- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces.
- Take precautions against static discharge.
- Keep cool.

Precautionary Statements-Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Control Center or doctor/physician.

IF SWALLOWED: Immediately call a Poison Control Center or doctor/physician. Rinse mouth. Do not induce vomiting.

IF EXPOSED: Call a Poison Control Center or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Control Center or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a Poison Control Center or doctor/physician.

IN CASE OF FIRE: Use CO₂, dry chemical or alcohol resistant foam to extinguish.

2. HAZARDS IDENTIFICATION (continued)

Precautionary Statements - Storage

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)

Keep out of the reach of children and pets.

Precautionary Statements - Disposal

Dispose according to all local, state and federal regulations.

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed.

Other Hazardous

Toxic to aquatic life.

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
Dodecyl Benzene Sulfonic Acid	27176-87-0	*
Potassium Hydroxide	1310-58-3	*
EDTA	60-00-4	*

*The exact percentage is a trade secret.

4. FIRST AID MEASURES

First Aid Measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a physician or Poison Control Center immediately.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists seek medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Never give anything by mouth to a person who is unconscious or convulsing. Call a physician or Poison Control Center immediately.
Skin Contact	Wash skin with flowing water or shower. If irritation persists, seek medical attention.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms	May cause mild skin irritation. May cause corneal injury and burn. Inhalation may cause respiratory tract irritation. Ingestion may cause burning of the mouth, throat and digestive tract.
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Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use CO₂, dry chemical or alcohol resistant foam to extinguish.

Unsuitable Extinguishing Media

Not Determined.

Specific Hazards Arising from the Chemical

None Known.

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 in section 8.
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.
See Section 12 for additional ecological information.

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.
Use personal protection recommended in Section 8.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Do not breathe dust/fumes/gas/mist/vapors/spray.
Keep container tightly closed.
Keep away from heat/sparks/open flames/hot surfaces.
Take precautions against static discharge.
Keep cool.

Keep out of the 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)

Keep out of the reach of children and pets.

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

Appropriate Engineering Controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits.
Eyewash stations and showers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (continued)

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, 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 and Lemon.

Property	Values	Remarks * Method
pH	9.5 - 10.5	68°F (20°C)
Melting Point / Freezing Point	< 32°F / < 0°C	
Boiling Point / Boiling Range	188°F / 87°C	(Approximate)
Flash Point	80°F / 27°C	
Evaporation Rate	< 1	(Butyl acetate = 1) (Approximate)
Flammability (Solid/Gas)	N/A-Liquid.	
Flammability Limits In Air	Not Determined.	
Vapor Pressure	Not Determined.	
Vapor Density	> 1	(Air = 1) (Approximate)
Specific Gravity	0.997	68°F (20°C) (Water = 1)
Water Solubility	Completely Soluble.	
Partition Coefficient	See Section 12.	
Autoignition Temperature	Not Determined.	
Decomposition Temperature	Not Determined.	
Kinematic Viscosity	Not Determined.	
Dynamic Viscosity	Not Determined.	
Explosive Properties	Not Determined.	
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). Avoid temperatures 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

Information on Likely Routes of Exposure

Product Information

Inhalation	Harmful if inhaled.
Eye Contact	Causes serious eye damage.
Ingestion	May be harmful if swallowed.
Skin Contact	Causes skin irritation.

Component Information

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Isopropyl Alcohol 67-63-0	4396 mg/kg (Rat)	12800 mg/kg (Rat)	72.6 mg/L (Rat) 4 hr.
o-phenylphenol 90-43-7	1049 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 0.949 mg/L (Rat) 1 hr.
Potassium Hydroxide 1310-58-3	214 mg/kg (Rat)	N/A	N/A

Information on Physical, Chemical and Toxicological Effects

Symptoms	Please see section 4 of this SDS for symptoms.
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11. TOXICOLOGICAL INFORMATION (continued)

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

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. However, 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

IARC (International Agency for Research on Cancer)

Group 3 - Not Carcinogenic to Humans.

ACGIH (The American Conference of Governmental Industrial Hygienists)

A4 - Not Classifiable as a Human Carcinogen.

STOT - Single Exposure

May cause respiratory irritation, drowsiness or dizziness.

STOT - Repeated Exposure

Not Determined.

Numerical Measures of Toxicity

Not Determined.

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic organisms.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl Alcohol 67-63-0	Known Toxin	Known Toxin	No Information	Known Toxin
o-phenylphenol 90-43-7	Known Toxin	Known Toxin	Known Toxin	Known Toxin

Persistence and Degradability

Not Determined.

Bioaccumulation

Not Determined.

Mobility

Chemical Name	Partition Coefficient
Isopropyl Alcohol 67-63-0	0.05
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 Liquids, n.o.s. (Contains Isopropyl Alcohol)
Hazard Class	3
Packing Group	III

IATA

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

IMDG

UN/ID No	UN1993
Proper Shipping Name	Flammable Liquids, 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

15. REGULATORY INFORMATION (continued)

US Federal Regulations

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
Dodecyl Benzene Sulfonic Acid 27176-87-0	1000 lb.	N/A	RQ 1000 lb. final RQ RQ 454 kg final RQ
EDTA 60-00-4	5000 lb.	N/A	RQ 5000 lb. final RQ RQ 2270 kg final RQ

SARA 311/312

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 311/312.

SARA 313

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%

CWA (Clean Water Act)

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
Dodecyl Benzene Sulfonic Acid 27176-87-0	1000 lb.	N/A	N/A	X
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)."

15. REGULATORY INFORMATION (continued)

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
Dodecyl Benzene Sulfonic Acid 27176-87-0	X	X	X
EDTA 60-00-4	X	X	X
o-benzyl-p-chlorophenol 120-32-1	X	N/A	X

16. OTHER INFORMATION

NFPA

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

Health Hazards Not Determined.	Flammability Not Determined.	Physical Hazards Not Determined.	Personal Protection Not Determined.
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Revision Note New format.

Disclaimer

The information contained herein is furnished without warranty or legal responsibility of any kind. 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 safety and health of employees.

End of Safety Data Sheet