

VaporCide™

Chemical Vapor Sterilant Solution

COTTRELL 

Providing Over 20 Years of
Infection Control

MATERIAL SAFETY DATA SHEET • MSDS # _____

ISSUE DATE: May 2001 (Supersedes August 1998)

Cottrell, Ltd. urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate, to use and understand the data in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors, and others whom it knows or believes will use this material of the information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

Emergency and First Aid Procedures

SWALLOWING: Give large amounts of water. INDUCE VOMITING A.S.A.P. (within 30 minutes of ingestion) to be most effective. Rinse mouth and throat thoroughly with tap water. Do not give anything by mouth to an unconscious or convulsing person. Seek medical assistance immediately.

SKIN: Flush thoroughly with water for 15 minutes. If irritation persists, seek medical attention.

INHALATION: Remove to fresh air. For respiratory distress, give air or oxygen. Obtain emergency medical attention.

EYES: Flush thoroughly with water for at least 15 minutes. Get medical attention.

NOTES TO PHYSICIAN: Refer to A.P.I.'s publication 4524 entitled "Clinical Toxicology of Acute Ingestion of Methanol Hydrocarbon Blends" for information regarding medical monitoring and treatment.

Phone: (303) 799-9401 • Emergency No.: (800) 535-5053

I. IDENTIFICATION

PRODUCT NAME: VaporCide™

CHEMICAL NAME: Blend

SYNONYMS: N/A

II. HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPONENTS	%	CAS #
Ethanol	57.00%	64-17-5
Formaldehyde (by Weight)	.23%	50-00-0
Methanol	35.00%	67-56-1

III. PHYSICAL DATA

BOILING POINT: 70°C - 80°C (158°F - 176°F)

FREEZING POINT: Below - 15°C

SPECIFIC GRAVITY (H₂O = 1): 0.795 - 0.825 g/cc

VAPOR PRESSURE AT 20° C: 50.0mm Hg

VAPOR DENSITY: 1.59

SOLUBILITY IN WATER: 100% @ 20°C

EVAPORATION RATE (n-Butyl Acetate = 1): 2.7

APPEARANCE: Clear liquid.

ODOR: Alcohol odor.

IV. FIRE AND EXPLOSION HAZARD

FLASH POINT: ASTM D56- 65°F

FLAMMABLE LIMITS IN AIR: For Ethyl Alcohol - LEL: 3.3%, UEL: 19%

EXTINGUISHING MEDIA: Class B Chemical Powder

SPECIAL FIRE FIGHTING PROCEDURES: None for small quantities.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None for small quantities.

AUTO IGNITION TEMPERATURE: 780°F

V. HEALTH HAZARD DATA

TLV AND SOURCE: Methanol

Components	OSHA 200	ACGIH 200	Other Limits
	PEL	TLV	Recommended
Ethanol	1000	1000	None
Formaldehyde (by weight)	.75	0.3	0.5 ppm action level
Methanol	200	200	

LISTED AS CARCINOGEN: Formaldehyde is a suspected carcinogen.

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING: May be harmful or fatal; may cause blindness.

SKIN ABSORPTION: May cause irritation and defatting of skin.

INHALATION: Headache, nausea, drowsiness.

EYE CONTACT: Causes substantial but temporary eye damage.

EFFECTS OF REPEATED OVEREXPOSURE:

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: N/A

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION: N/A

OTHER EFFECTS OF OVEREXPOSURE: Ingestion: May cause death or irreversible injury such as blindness. High level exposure may induce birth defects. Personnel with pre-existing central nervous system disease, skin disorders, impaired liver or kidney function or chronic respiratory disease should avoid exposure.

TOXICITY: Not a primary dermal irritant, non-allergenic, non-mutagenic. A transient eye irritant.

Oral LD₅₀: Greater than 1gr/Kgram

Dermal LD₅₀: Greater than 2gr/Kgram

VI. REACTIVITY DATA

STABILITY: Stable.

CONDITIONS TO AVOID: Heat, fire and ignition sources.

INCOMPATIBILITY (MATERIALS TO AVOID): Concentrated nitric and sulfuric acids, strong oxidizing agents.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Burning can produce carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur.

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Extinguish and do not turn on any ignition source. Flush small spills with water. Wear suitable protective equipment. Collect large spills for disposal.

WASTE DISPOSAL METHOD: Ignitable, should be disposed of as required by hazardous waste regulations.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): Face shield recommended when handling product or opening sterilizer.

PROTECTIVE GLOVES: Neoprene gloves recommended.

EYE PROTECTION: Chemical safety goggles meeting the specification of ANSI Standard Z87.1 should be worn whenever there is the possibility of splashing or other contact with eyes.

ATTENTION: Wear face shield when handling this product and when opening the door of the sterilizer after the treatment cycle.

OTHER PROTECTIVE EQUIPMENT: N/A

VENTILATION: Use in a well ventilated area. Avoid inhalation of fumes.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Keep away from heat or open flames. Do not use as a cleaning solvent. KEEP OUT OF REACH OF CHILDREN.

OTHER PRECAUTIONS: Store in dry area (40°F - 90°F).

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

FEDERAL EPA

STATE RIGHT-TO-KNOW SARA TITLE III, 313 - 1/1/87 - 1%

California Prop 65 Warning: This product contains formaldehyde, a chemical known to the State of California to cause cancer.

XI. TRANSPORTATION DATA

D.O.T. (Ground)

ORM-D Consumer Commodity

I.A.T.A. (Air)

ORM-D Consumer Commodity

PROPER SHIPPING NAME

VaporCide®

VaporCide®

CHEMICAL WARNING LABELS

Required on containers, tubs, and bottles which are filled from original containers with potentially hazardous substances.

Below are the hazard ratings corresponding to the NFPA Rating System.

NFPA HAZARD RATING

HEALTH: 3

Warning – Protect skin; do not inhale; irritant.

FLAMMABILITY: 3

Warning - Flash point 65°F

REACTIVITY: 1

Below is a sample of a chemical warning label available from Cottrell, Ltd., which reflects chemical information for VaporCide™. It clearly communicates what each hazard means – no wall reference chart is necessary.

NFPA HAZARD RATING

HEALTH: 3
Warning – Protect skin; do not inhale; irritant.

FLAMMABILITY: 3
Warning - Flash point 65°F

REACTIVITY: 1

Product Name: VaporCide™
Hazardous chemical(s): Ethanol, Methanol
Formaldehyde

Route of Entry:
☒ Inhalation
☒ Ingestion
☒ Skin/Eye Absorption

Target Organ Effects:
☐ Respiratory ☐ Prostate
☐ Heart ☐ Blood
☐ Kidney ☐ Liver
☐ Eyes ☐ CNS
☐ Skin ☐ Other: _____

Personal Protection: Face Shield, Goggles,
Neoprene Gloves

MSDS#: _____

Health Hazard <input type="checkbox"/> Irritant <input type="checkbox"/> Carcinogen <input checked="" type="checkbox"/> Toxic <input type="checkbox"/> Sensitizer <input type="checkbox"/> Normal Material	Fire Hazard <small>Flash Point:</small> <input checked="" type="checkbox"/> Below 73°F <input type="checkbox"/> Below 100°F <input type="checkbox"/> Above 100°F, Not exceeding 200°F <input type="checkbox"/> Above 200°F <input type="checkbox"/> Will Not Burn
Physical Hazard <input type="checkbox"/> Oxidizer <input type="checkbox"/> Acid <input type="checkbox"/> Alkali <input type="checkbox"/> Corrosive <input type="checkbox"/> Use NO Water <input type="checkbox"/> Radioactive	Reactivity <input type="checkbox"/> May Detonate <input type="checkbox"/> Reacts and Inst. May Detonate <input type="checkbox"/> Violent Chemical Change <input type="checkbox"/> Stable if Heated <input checked="" type="checkbox"/> Stable

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