

MATERIAL SAFETY DATA SHEET

Pharmaceutical Research Laboratories Inc. • PO BOX 369 Naugatuck, CT 06770
(203) 755-4908 • 800-243-5350 • FAX (203) 755-4309
www.pharmaceutical.com

PRODUCT: QUATRICIDE® PV-15
EPA Reg. # 47371-129-08714

REV. 02/28/07

CAS # MIXTURE
CHEMICAL NAME: MIXTURE

Health-3 Fire-1 Reactivity-0
DOT HAZARD CLASS: 8, PG III
DOT SHIPPING NAME: Disinfectant, Liquid, Corrosive, NOS
DOT LABEL: CORROSIVE

MANUFACTURER: PHARMACAL RESEARCH LABS., INC.
562 Captain Neville Drive
Waterbury, CT 06705

EMERGENCY TELEPHONE NUMBERS:
CHEMTREC 1-800-424-9300
IN CANADA CALL CANUTEC 1-613-996-6666

I. COMPONENTS AND HAZARD INFORMATION

| COMPONENTS | APPROXIMATE WEIGHT % | TWA/TLV |
|--|----------------------|---|
| N,N- Didecyl-N,N-Dimethylammonium Chloride (CAS No 7173-51-5) | 9.70 | None established |
| N-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl-N-benzylammonium chloride (CAS No 8001-54-5) | 6.47 | None established |
| N,N-Dimethyl-1-octylamine-N-oxide (CAS No 2605-78-9) | 3.2 | None established |
| Ethylenediaminetetraacetic acid, trisodium salt (CAS No 150-38-9) | 3.7 | None established |
| Ethanol (CAS No 64-17-5) | 3.1 | 1000 ppm (OSHA-PEL) 1000 ppm (ACGIH-TWA) |
| Water | 74.8 | None established |

WARNING STATEMENTS
DANGER. CORROSIVE.
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

II. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: ORANGE LIQUID
pH 7.2 - 8.2
ODOR: No fragrances added
SPECIFIC GRAVITY (water = 1) 1.0
VISCOSITY Not Known
BOILING POINT: Not known

VAPOR DENSITY (Air = 1) Not known
VAPOR PRESSURE (mm Hg) Not known
PERCENT VOLATILE (by weight) 77.9
EVAPORATION RATE (Butyl Acetate = 1) Not known
SOLUBILITY IN WATER: Soluble
MELTING OR FREEZING POINT: Not known

III. FIRE AND EXPLOSION INFORMATION

FLASH POINT > 200°F
AUTO IGNITION TEMPERATURE: Not known
EXTINGUISHING MEDIA: WATER, FOAM, CO₂, DRY CHEMICAL

LOWER EXPLOSION LIMIT (%) N/A
UPPER EXPLOSION LIMIT (%) N/A

SPECIAL FIRE FIGHTING PROCEDURES:

MUST wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water spray.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Products of combustion are toxic.

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IV. EMERGENCY FIRST AID PROCEDURES & HEALTH EFFECTS

PRIMARY ROUTES OF ENTRY: EYE CONTACT, SKIN CONTACT, AND INHALATION

EMERGENCY FIRST AID

| | |
|---------------------------|---|
| EYES: | <ul style="list-style-type: none">• Immediately flush eye with large amounts of water for 15 - 20 minutes.• Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water.• Get immediate medical attention.• If physician not available, flush for additional 15 minutes and then transport victim to medical care. |
| SKIN: | <ul style="list-style-type: none">• Wash with large amounts of running water, and soap if available, for 15 - 20 minutes.• Remove contaminated clothing and shoes.• Get immediate medical attention.• Wash all contaminated clothing before reuse. |
| INHALATION: | <ul style="list-style-type: none">• Move to fresh air.• Use oxygen or artificial respiration if needed.• GET MEDICAL ATTENTION. |
| INGESTION: | <ul style="list-style-type: none">• Immediately give 3-4 glasses of milk (if unavailable, give water)• Do NOT induce vomiting.• If vomiting occurs, give fluids again.• GET MEDICAL ATTENTION.• Do not give anything by mouth to a convulsing or unconscious person. |
| Note to physician: | <ul style="list-style-type: none">• Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug. |

EFFECTS OF OVEREXPOSURE / SIGNS AND SYMPTOMS OF EXPOSURE:

BASED ON INFORMATION AVAILABLE FOR SIMILAR PRODUCTS, IT IS ANTICIPATED THAT DIRECT CONTACT WILL PRODUCE SEVERE EYE AND SKIN IRRITATION AND/OR BURNS AND POSSIBLE IRREVERSIBLE DAMAGE. SOLVENT VAPORS OR MIST OF PRODUCT CAN PRODUCE IRRITATION OF THE MUCOUS MEMBRANES. INGESTION CAN PRODUCE IMMEDIATE BURNING PAIN IN THE MOUTH, THROAT AND ABDOMEN, SEVERE SWELLING OF THE LARYNX, SKELETAL MUSCLE PARALYSIS AFFECTING THE ABILITY TO BREATHE, CIRCULATORY SHOCK, AND/OR CONVULSIONS.

EXPOSURE TO ETHYL ALCOHOL CONCENTRATIONS OF OVER 1,000 PPM MAY CAUSE HEADACHE, IRRITATION OF THE EYES, NOSE AND THROAT, AND IF CONTINUED, DROWSINESS AND LASSITUDE, LOSS OF APPETITE AND ABILITY TO CONCENTRATE.

V. TOXICOLOGY

CHEMICALS LISTED AS CARCINOGEN BY: (YES OR NO)

NATIONAL TOXICOLOGY PROGRAM: NO
I.A.R.C. MONOGRAPHS: NO
OSHA: NO

NO SPECIFIC INFORMATION IS AVAILABLE. THE FOLLOWING INFORMATION IS ON CLOSELY RELATED PRODUCTS.

LONZA FORMULATION S-18 CONTAINING 10.8 % ACTIVE QUAT
ORAL LD 50 (RAT): 1650 MG/KG
DERMAL LD50 (RABBIT): 1870 MG/KG
EYE IRRITATION (RABBIT) SEVERE EYE IRRITANT
SKIN IRRITATION (RABBIT) SEVERE IRRITANT
SKIN CORROSIVITY (DOT METHOD): CORROSIVE

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VI. HAZARDS

| COMPONENTS | CAS NO. OF COMPONENTS | HAZARD CATEGORIES |
|--|-----------------------|-------------------|
| N,N- Didecyl-N,N-Dimethylammonium Chloride | 7173-51-5 | A |
| N-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl-N-benzylammonium chloride | 8001-54-5 | A |

F = FIRE HAZARD

S = SUDDEN RELEASE OF PRESSURE

R = REACTIVE

A = IMMEDIATE (ACUTE) HEALTH HAZARD

C = DELAYED (CHRONIC) HEALTH HAZARD

VII. REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION MAY PRODUCE TOXIC VAPORS / FUMES OF HYDROGEN CHLORIDE, AMINES, AND OXIDES OF CARBON AND NITROGEN

CONDITIONS TO AVOID: STRONG OXIDIZING OR REDUCING AGENTS

VIII. SPILL, LEAK, AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

DANGER! CORROSIVE LIQUID.

Wear appropriate protective gear and respiratory protection where mist or vapor of unknown concentrations may be generated (self contained breathing apparatus is preferred).

Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers for recovery or disposal. Keep spilled material out of sewers and open bodies of water.

Floors may become slippery.

WASTE DISPOSAL METHODS:

Dispose of in compliance with all Federal, State, and local laws and regulations. Incineration is the preferred method.

STORAGE AND HANDLING

PRECAUTIONS FOR STORAGE AND HANDLING:

Store at temperatures below 140°F. Keep containers closed until used. Do not contaminate drinking water, food or feed by storage or disposal.

FOR 1 GALLON OR LESS

Keep product under locked storage, inaccessible to small children. Do not reuse empty container. Rinse thoroughly, securely wrap empty container in several layers of newspaper, and discard in trash or recycle.

CONTAINER DISPOSAL:

Triple Rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

“EMPTY” CONTAINER WARNINGS:

DO NOT REUSE EMPTY CONTAINER. TRIPLE RINSE WITH WATER - DISPOSE OF IN CONFORMANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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IX. PERSONAL PROTECTION INFORMATION:

ENGINEERING CONTROLS:

In processes where mist or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices.

RESPIRATORY PROTECTION:

NIOSH/MSHA approved respirator if there is a reasonable possibility of exposure to vapors or fumes.

PROTECTIVE GLOVES:

Rubber or Neoprene to prevent skin contact.

EYE PROTECTION:

Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields where there is no potential for eye contact.

OTHER PROTECTIVE EQUIPMENT:

Eye wash, safety shower, protective clothing (long sleeve, coveralls, etc) to prevent skin contact.

X. REGULATORY INFORMATION

FEDERAL LEVEL REGULATIONS:

TOXIC SUBSTANCE CONTROL ACT (TSCA INVENTORY) STATUS:

All components are listed on the US EPA TSCA 8(b) inventory

TSCA Section 12(b) Export Notification:

Components present in this product which, if exported, could require either annual or one-time reporting under this regulation are as follows:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|----------------------|-------------------|--------------------------------------|
| None known | N/A | N/A |

US EPA Regulation on Pesticides:

This is an EPA registered pesticide (EPA REG # 47371-129-08714). This material can only be used commercially in the EPA registered application (s) noted on the product label.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of 1980 requires notification of the National Response Center (Telephone number 800-424-8802) in the event of a release of quantities of the following hazardous materials contained in this product, if the release is equal to or greater than the Reportable Quantities (RQs) listed in 40 CFR 302.4:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|----------------------|-------------------|--------------------------------------|
| None known | N/A | N/A |

SARA TITLE III, Sections 302/304 (Superfund Amendments and Reauthorization Act of 1986):

This Act requires emergency planning, including agency notification, for possible release of the following components of this material, based upon this Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) listed for the Components in 40 CFR 355:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|----------------------|-------------------|--------------------------------------|
| None known | N/A | N/A |

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FEDERAL LEVEL REGULATIONS (Continued):

SARA TITLE III, Sections 311 / 312:

This act requires reporting under the Community right To Know provisions due to the inclusion of the following components of this material in one or more of the five hazard categories listed in the 40 CFR 370:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>* Hazard Categories</u> |
|---|--------------------------|-----------------------------------|
| N,N- Didecyl-N,N-Dimethylammonium Chloride | 7173-51-5 | A |
| N-Alkyl (C ₁₂ - C ₁₆) N,N-dimethyl-N-benzylammonium chloride | 68424-85-1 | A |
| N,N-Dimethyl-1-octylamine-N-oxide | 2605-78-9 | A |
| Ethanol | 64-17-5 | F |

* The five hazard categories are as follows:

F = Fire Hazard

S = Sudden Release of Pressure

A = Immediate (ACUTE) Health Hazard

C = Delayed (CHRONIC) Health Hazard

Sara Title III Section 313:

This Act requires submission of annual reports of the releases of the following components of this material if the threshold reporting quantities as listed in 40 CFR 372, are met or exceeded.

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|-----------------------------|--------------------------|---|
| None known | N/A | N/A |

STATE RIGHT TO KNOW REGULATIONS:

CALIFORNIA PROPOSITION 65:

Components present in this material which the State of California has found to cause cancer, birth defects or other reproductive harm are as follows:

AS A CANCER HAZARD

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|-----------------------------|--------------------------|---|
| Acetaldehyde | 75-07-0 | 300 ppb |
| Benzene | 71-43-2 | 15 ppm |
| Benzyl chloride | 100-44-7 | 30 ppm |
| N-Nitrosodimethylamine | 62-75-9 | 160 ppb |
| Propylene oxide | 75-56-9 | 3 ppm |

AS A REPRODUCTIVE HAZARD

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|-----------------------------|--------------------------|---|
| Benzene | 71-43-2 | 15 ppm |
| Tolene | 108-88-3 | 15 ppm |

MASSACHUSETTS RIGHT TO KNOW:

The following components of this material are included in the Massachusetts Substance List and are present at or above reportable levels.

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|-----------------------------|--------------------------|---|
| Acetaldehyde | 75-07-0 | 300 ppb |
| Benzene | 71-43-2 | 15 ppm |
| Benzyl chloride | 100-44-7 | 30 ppm |
| Ethanol | 64-17-5 | 3.1% |
| Hydrogen peroxide | 7722-84-1 | 30 ppm |
| Propylene oxide | 75-56-9 | 3 ppm |

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STATE RIGHT TO KNOW REGULATIONS (continued):

Michigan Critical Materials:

The following components of this material are included in the Michigan Critical Materials List.

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|-----------------------------|--------------------------|---|
| None known | N/A | N/A |

New Jersey Right To Know:

The following components of this material are included in New Jersey Hazardous Substance List and are present at or above reportable levels.

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|---|--------------------------|---|
| N,N- Didecyl-N,N-Dimethylammonium Chloride | 7173-51-5 | 9.70% |
| N-Alkyl (C ₁₂ - C ₁₆) N,N-dimethyl-N-benzylammonium chloride | 68424-85-1 | 6.47% |
| Ethanol | 64-17-5 | 3.1% |

Pennsylvania Right To Know:

The following components of this material are included in Pennsylvania Hazardous Substance List and are present at or above reportable levels.

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Typical Maximum Concentration</u> |
|-----------------------------|--------------------------|---|
| Ethanol | 64-17-5 | 3.1% |

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE, TO THE BEST OF PHARMACAL'S KNOWLEDGE, ACCURATE AND RELIABLE AS OF THE DATE ISSUE. PHARMACAL DOES NOT WARRANT OR GUARANTEE THEIR ACCURACY OR RELIABILITY, AND PHARMACAL SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE ARISING OUT OF THERE USE THEREOF. THE INFORMATION AND RECOMMENDATIONS ARE OFFERED FOR THE USER'S CONSIDERATION AND EXAMINATION, AND IT IS THE USER'S RESPONSIBILITY TO SATISFY ITSELF THAT THEY ARE SUITABLE AND COMPLETE FOR ITS PARTICULAR USE. THE HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) AND NATIONAL FIRE PROTECTION ASSOCIATION RATINGS HAVE BEEN INCLUDED BY PHARMACAL RESEARCH LABORATORIES INC. IN ORDER TO PROVIDE ADDITIONAL HEALTH AND HAZARD INFORMATION. THE RATINGS RECOMMENDED ARE BASED UPON CRITERIA SUPPLIED BY THE DEVELOPERS OF THESE RATING SYSTEMS, TOGETHER WITH PHARMACAL'S INTERPRETATION OF THE AVAILABLE DATA.