

# ***Chem-Impex International Inc.***

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825 Dillon Drive  
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## **SAFETY DATA SHEET**

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### **SECTION 1. CHEMICAL IDENTIFICATION**

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|                                 |   |
|---------------------------------|---|
| CATALOG #:                      | 36412   |
| NAME:                           | Trichloromethyl chloroformate                       |
| SYNONYMS:                       | Diphosgene<br>TCF                                   |
| 24 HOUR EMERGENCY<br>TELEPHONE: | (800) 535-5053(USA)<br>352-323-3500 (INTERNATIONAL) |
| TO REQUEST AN MSDS:             | (800) 869-9290                                      |
| CUSTOMER<br>SERVICE:            | (630) 766-2112                                      |

### **SECTION 2. HAZARDS IDENTIFICATION**

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#### **CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

#### **GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)**

ACUTE TOXICITY, ORAL (CATEGORY 4), H302

ACUTE TOXICITY, INHALATION (CATEGORY 2), H330

SKIN CORROSION (CATEGORY 1B), H314

SERIOUS EYE DAMAGE (CATEGORY 1), H318

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS  
PICTOGRAM**



**SIGNAL WORD** DANGER

**HAZARD STATEMENT(S)**

H302 HARMFUL IF SWALLOWED.  
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.  
H330 FATAL IF INHALED.

**PRECAUTIONARY STATEMENT(S)**

P260 DO NOT BREATHE DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.  
  
P264 WASH SKIN THOROUGHLY AFTER HANDLING.  
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.  
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.  
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.  
  
P284 WEAR RESPIRATORY PROTECTION.  
P301 + P312 + P330 IF SWALLOWED: CALL A POISON CENTER/DOCTOR IF YOU FEEL UNWELL. RINSE MOUTH.  
  
P301 + P330 + P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.  
P303 + P361 + P353 IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER.  
  
P304 + P340 + P310 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER/DOCTOR.  
  
P305 + P351 + P338 + P310 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 CENTER/DOCTOR.  
  
P363 WASH CONTAMINATED CLOTHING BEFORE REUSE.  
P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.  
  
P405 STORE LOCKED UP.  
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

**HAZARDS NOT  
OTHERWISE  
CLASSIFIED (HNOC)  
OR NOT COVERED BY  
GHS**

LACHRYMATOR

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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MF: ClC(=O)OCCl3

MW: 197.83

CAS-NO. 503-38-8

PURITY:  $\geq 97\%$  (GC)

#### HAZARDOUS COMPONENTS

| COMPONENT                            | CLASSIFICATION  | CONCENTRATION |
|--------------------------------------|---|---------------|
| <b>Trichloromethyl chloroformate</b> |   |               |
|                                      | ACUTE TOX. 4; ACUTE TOX. 2;<br>SKIN CORR. 1B; EYE DAM. 1;<br>H302, H330, H314, H318 | $\leq 100\%$  |

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

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### SECTION 4. FIRST-AID MEASURES

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#### DESCRIPTION OF FIRST AID MEASURES

|                                    |   |
|------------------------------------|---|
| GENERAL ADVICE                     | CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.  |
| IF INHALED                         | IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.   |
| IN CASE OF SKIN CONTACT            | TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A PHYSICIAN. |
| IN CASE OF EYE CONTACT             | RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.CONTINUE RINSING EYES DURING TRANSPORT TO HOSPITAL.               |
| IF SWALLOWED                       | DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.                             |
| <b>MOST IMPORTANT SYMPTOMS AND</b> | THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2)  |

|  |                       |
|--|-----------------------|
| <b>EFFECTS, BOTH ACUTE AND DELAYED</b> | AND/OR IN SECTION 11. |
|--|-----------------------|

|   |                   |
|---|-------------------|
| <b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b> | NO DATA AVAILABLE |
|---|-------------------|

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## **SECTION 5. FIRE AND EXPLOSION DATA**

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### **EXTINGUISHING MEDIA**

|                                     |  |
|-------------------------------------|--|
| <b>SUITABLE EXTINGUISHING MEDIA</b> | USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE. |
|-------------------------------------|--|

|  |  |
|--|--|
| <b>SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE</b> | CARBON OXIDES, HYDROGEN CHLORIDE GAS NOT COMBUSTIBLE. COMBUSTIBLE. |
|--|--|

|                                |   |
|--------------------------------|---|
| <b>ADVICE FOR FIREFIGHTERS</b> | WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY. |
|--------------------------------|---|

|                            |                   |
|----------------------------|-------------------|
| <b>FURTHER INFORMATION</b> | NO DATA AVAILABLE |
|----------------------------|-------------------|

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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|  |   |
|--|---|
| <b>PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</b> | WEAR RESPIRATORY PROTECTION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS.<br><br>FOR PERSONAL PROTECTION SEE SECTION 8. |
|--|---|

|                                  |  |
|----------------------------------|--|
| <b>ENVIRONMENTAL PRECAUTIONS</b> | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. |
|----------------------------------|--|

|  |  |
|--|--|
| <b>METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP</b> | SOAK UP WITH INERT ABSORBENT MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL. |
|--|--|

|                                    |                              |
|------------------------------------|------------------------------|
| <b>REFERENCE TO OTHER SECTIONS</b> | FOR DISPOSAL SEE SECTION 13. |
|------------------------------------|------------------------------|

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## SECTION 7. HANDLING AND STORAGE

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|   |  |
|---|--|
| <b>PRECAUTIONS FOR SAFE HANDLING</b>                                | AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOUR OR MIST. FOR PRECAUTIONS SEE SECTION 2.2.   |
| <b>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b> | KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.<br><br>LIGHT SENSITIVE. STORE UNDER INERT GAS. HEAT SENSITIVE. |
| <b>SPECIFIC END USE(S)</b>  | Store at 2 - 8 °C<br>APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED.   |

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### CONTROL PARAMETERS

#### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.  
HAZARDOUS COMPONENTS WITHOUT WORKPLACE CONTROL PARAMETERS

### EXPOSURE CONTROLS

|                                  |  |
|----------------------------------|--|
| APPROPRIATE ENGINEERING CONTROLS | AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT. |
|----------------------------------|--|

### PERSONAL PROTECTIVE EQUIPMENT

|                     |  |
|---------------------|--|
| EYE/FACE PROTECTION | TIGHTLY FITTING SAFETY GOGGLES. FACESHIELD (8-INCH MINIMUM). USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).   |
| SKIN PROTECTION     | HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS. |

|                                   |  |
|-----------------------------------|--|
| BODY PROTECTION                   | COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.  |
| RESPIRATORY PROTECTION            | WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). |
| CONTROL OF ENVIRONMENTAL EXPOSURE | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.   |

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## SECTION 9.      PHYSICAL AND CHEMICAL PROPERTIES

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### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

|                           |                   |
|---------------------------|-------------------|
| APPEARANCE                | Colorless liquid  |
| ODOUR                     | NO DATA AVAILABLE |
| ODOUR THRESHOLD           | NO DATA AVAILABLE |
| PH                        | NO DATA AVAILABLE |
| MELTING                   |                   |
| POINT/FREEZING POINT      |                   |
| INITIAL BOILING POINT     | 20 °C/10 mmHg     |
| AND BOILING RANGE         |                   |
| FLASH POINT               |                   |
| EVAPOURATION RATE         | NO DATA AVAILABLE |
| FLAMMABILITY (SOLID, GAS) | NO DATA AVAILABLE |
| UPPER/LOWER               | NO DATA AVAILABLE |
| FLAMMABILITY OR           |                   |
| EXPLOSIVE LIMITS          |                   |
| VAPOUR PRESSURE           | NO DATA AVAILABLE |
| VAPOUR DENSITY            | NO DATA AVAILABLE |
| RELATIVE DENSITY          | 1.639             |
| WATER SOLUBILITY          | NO DATA AVAILABLE |
| PARTITION COEFFICIENT:    | NO DATA AVAILABLE |
| N- OCTANOL/WATER          |                   |
| AUTO-IGNITION             | NO DATA AVAILABLE |
| TEMPERATURE               |                   |
| DECOMPOSITION             | NO DATA AVAILABLE |
| TEMPERATURE               |                   |
| VISCOSITY                 | NO DATA AVAILABLE |

|                                 |                   |
|---------------------------------|-------------------|
| EXPLOSIVE PROPERTIES            | NO DATA AVAILABLE |
| OXIDIZING PROPERTIES            | NO DATA AVAILABLE |
| <b>OTHER SAFETY INFORMATION</b> | NO DATA AVAILABLE |

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## SECTION 10. STABILITY AND REACTIVITY

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|   |   |
|---|---|
| <b>REACTIVITY</b>                         | NO DATA AVAILABLE   |
| <b>CHEMICAL STABILITY</b>                 | STABLE UNDER RECOMMENDED STORAGE CONDITIONS.  |
| <b>POSSIBILITY OF HAZARDOUS REACTIONS</b> | NO DATA AVAILABLE   |
| <b>CONDITIONS TO AVOID</b>                | HEAT  |
| <b>INCOMPATIBLE MATERIALS</b>             | STRONG OXIDIZING AGENTS, BASES  |
| <b>HAZARDOUS DECOMPOSITION PRODUCTS</b>   | HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, HYDROGEN CHLORIDE GAS<br>OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5 |

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## SECTION 11. TOXICOLOGICAL INFORMATION

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### INFORMATION ON TOXICOLOGICAL EFFECTS

|  |                                |
|--|--------------------------------|
| <b>ACUTE TOXICITY</b>                    | NO DATA AVAILABLE              |
|  | INHALATION : NO DATA AVAILABLE |
|  | DERMAL: NO DATA AVAILABLE      |
|  | NO DATA AVAILABLE              |
| <b>SKIN CORROSION/IRRITATION</b>         | NO DATA AVAILABLE              |
| <b>SERIOUS EYE DAMAGE/EYE IRRITATION</b> | NO DATA AVAILABLE              |
| <b>RESPIRATORY OR SKIN SENSITISATION</b> | NO DATA AVAILABLE              |

|   |   |
|---|---|
| <b>GERM CELL<br/>MUTAGENICITY</b>                                 | NO DATA AVAILABLE   |
| <b>CARCINOGENICITY</b>  |   |
| IARC:   | NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.                               |
| NTP:  | NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP.   |
| OSHA:   | NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.  |
| <b>REPRODUCTIVE TOXICITY</b>                                      | NO DATA AVAILABLE   |
| <b>SPECIFIC TARGET ORGAN<br/>TOXICITY - SINGLE<br/>EXPOSURE</b>   | NO DATA AVAILABLE   |
| <b>SPECIFIC TARGET ORGAN<br/>TOXICITY - REPEATED<br/>EXPOSURE</b> | NO DATA AVAILABLE   |
| <b>ASPIRATION HAZARD</b>  | NO DATA AVAILABLE   |
| <b>ADDITIONAL<br/>INFORMATION</b>                                 | RTECS: LQ7350000<br><br>MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN, COUGH, SHORTNESS OF BREATH, HEADACHE, NAUSEA |

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## SECTION 12. ECOLOGICAL INFORMATION

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|  |                   |
|--|-------------------|
| <b>TOXICITY</b>                          | NO DATA AVAILABLE |
| <b>PERSISTENCE AND<br/>DEGRADABILITY</b> | NO DATA AVAILABLE |
| <b>BIOACCUMULATIVE<br/>POTENTIAL</b>     | NO DATA AVAILABLE |
| <b>MOBILITY IN SOIL</b>                  | NO DATA AVAILABLE |



|   |   |
|---|---|
| <b>RESULTS OF PBT AND VPVB ASSESSMENT</b> | PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED. |
| <b>OTHER ADVERSE EFFECTS</b>              | NO DATA AVAILABLE   |

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## SECTION 13. DISPOSAL CONSIDERATIONS

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### WASTE TREATMENT METHODS

|                               |  |
|-------------------------------|--|
| <b>PRODUCT</b>                | OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. |
| <b>CONTAMINATED PACKAGING</b> | DISPOSE OF AS UNUSED PRODUCT.  |

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## SECTION 14. TRANSPORT INFORMATION

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### DOT (US)

|                           |   |
|---------------------------|---|
| PROPER SHIPPING NAME:     | CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.<br>(Trichloromethyl chloroformate) |
| UN NUMBER:                | 3277  |
| CLASS:                    | 6.1 (8)   |
| PACKING GROUP:            | II  |
| REPORTABLE QUANTITY (RQ): |   |
| POISON INHALATION HAZARD: | NO  |

### IMDG

|                       |   |
|-----------------------|---|
| PROPER SHIPPING NAME: | CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.<br>(Trichloromethyl chloroformate) |
| UN NUMBER:            | 3277  |
| CLASS:                | 6.1 (8)   |
| PACKING GROUP:        | II  |
| EMS-NO:               | F-A, S-B  |

### IATA

|                       |   |
|-----------------------|---|
| PROPER SHIPPING NAME: | CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.<br>(Trichloromethyl chloroformate) |
| UN NUMBER:            | 3277  |
| CLASS:                | 6.1 (8)   |

PACKING GROUP:

II

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## SECTION 15. REGULATORY INFORMATION

|   |   |               |
|---|---|---------------|
| <b>SARA 302 COMPONENTS</b>                    | NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.   |               |
| <b>SARA 313 COMPONENTS</b>                    | THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313. |               |
| <b>SARA 311/312 HAZARDS</b>                   | ACUTE HEALTH HAZARD   |               |
| <b>MASSACHUSETTS RIGHT TO KNOW COMPONENTS</b> | NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.   |               |
| <b>PENNSYLVANIA RIGHT TO KNOW COMPONENTS</b>  | CAS-<br>NO.   | REVISION DATE |
| Trichloromethyl chloroformate                 | 503-38-8  |               |
| <b>NEW JERSEY RIGHT TO KNOW COMPONENTS</b>    | CAS-<br>NO.   | REVISION DATE |
| Trichloromethyl chloroformate                 | 503-38-8  |               |
| <b>CALIFORNIA PROP. 65 COMPONENTS</b>         | THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.  |               |

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## SECTION 16. OTHER INFORMATION

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### FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

|      |  |
|------|--|
| H302 | HARMFUL IF SWALLOWED.                    |
| H314 | CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. |
| H330 | FATAL IF INHALED.                        |

### MSDS LEGEND

|        |   |
|--------|---|
| MW:    | MOLECULAR WEIGHT  |
| MF:    | MOLECULAR FORMULA   |
| VOC:   | VOLATILE ORGANIC COMPOUNDS                                |
| ACGIH: | AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS |
| CAS:   | CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER                |
| OSHA:  | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION             |

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)  
TLV: THRESHOLD LIMIT VALUE (ACGIH)

**IMPORTANT:**

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