# **Chem-Impex International Inc.**

Tel: (630) 766-2112 E-mail: <u>sales@chemimpex.com</u> Shipping and Correspondence: 935 Dillon Drive Wood Dale, IL 60191 USA Fax: (630) 766-2218 Web site: <u>www.chemimpex.com</u> Manufacturing site: 825 Dillon Drive Wood Dale, IL 60191 USA

# SAFETY DATA SHEET

#### SECTION 1. CHEMICAL IDENTIFICATION

| CATALOG #:           | 40552                        |
|----------------------|------------------------------|
| NAME:                | Triethylvinylsilane          |
| SYNONYMS:            | Vinyltriethylsilane          |
| 24 HOUR EMERGENCY    | (800) 535-5053(USA)          |
| TELEPHONE:           | 352-323-3500 (INTERNATIONAL) |
| TO REQUEST AN MSDS:  | (800) 869-9290               |
| CUSTOMER<br>SERVICE: | (630) 766-2112               |

#### SECTION 2. HAZARDS IDENTIFICATION

#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) FLAMMABLE LIQUIDS (CATEGORY 3), H226 SKIN IRRITATION (CATEGORY 2), H315

#### EYE IRRITATION (CATEGORY 2A), H319 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3), RESPIRATORY SYSTEM, H335

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

# GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD

# HAZARD STATEMENT(S)

| H226 | FLAMMABLE LIQUID AND VAPOUR.      |  |
|------|-----------------------------------|--|
| H315 | CAUSES SKIN IRRITATION.           |  |
| H319 | CAUSES SERIOUS EYE IRRITATION.    |  |
| H335 | MAY CAUSE RESPIRATORY IRRITATION. |  |

#### **PRECAUTIONARY STATEMENT(S)**

| P210               | KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT          |
|--------------------|---|
|                    | SURFACES. NO SMOKING.                               |
| P233               | KEEP CONTAINER TIGHTLY CLOSED.                      |
| P240               | GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.      |
| P241               | USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/        |
|                    | LIGHTING EQUIPMENT.                                 |
| P242               | USE ONLY NON-SPARKING TOOLS.                        |
| P243               | TAKE PRECAUTIONARY MEASURES AGAINST STATIC          |
|                    | DISCHARGE.  |
| P261               | AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/     |
|                    | SPRAY.  |
| P264               | WASH SKIN THOROUGHLY AFTER HANDLING.                |
| P271               | USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA      |
| P280               | WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE        |
|                    | PROTECTION.   |
| P303 + P361 + P353 | IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY  |
|                    | ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/   |
|                    | SHOWER.   |
| P304 + P340 + P312 | IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP     |
|                    | COMFORTABLE FOR BREATHING. CALL A POISON            |
|                    | CENTER/DOCTOR IF YOU FEEL UNWELL.                   |
| P305 + P351 + P338 | IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL |
|                    | MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND      |
|                    | EASY TO DO. CONTINUE RINSING.                       |
| P332 + P313        | IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/      |
|                    | ATTENTION.  |
| P337 + P313        | IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/     |
|                    | ATTENTION.  |
| P362               | TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE      |
|                    | REUSE.  |
| P370 + P378        | IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR      |
|                    | ALCOHOL-RESISTANT FOAM TO EXTINGUISH.               |
| P403 + P233        | STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER    |
|                    | TIGHTLY CLOSED.                                     |
|                    |   |

| P403 + P235 | STORE IN A WELL-VENTILATED PLACE. KEEP COOL.  |
|-------------|---|
| P405        | STORE LOCKED UP.                              |
| P501        | DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED |
|             | WASTE DISPOSAL PLANT.                         |

HAZARDS NOTNONEOTHERWISECLASSIFIED (HNOC)OR NOT COVEREDBY GHS

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| MF:     | $\mathrm{C_8H_{18}Si}$ |
|---------|------------------------|
| MW:     | 142.32                 |
| CAS-NO. | 1112-54-5              |
| PURITY: | $\geq$ 96% (GC)        |

#### HAZARDOUS COMPONENTS

| COMPONENT           | CLASSIFICATION               | CONCENTRATION |
|---------------------|------------------------------|---------------|
| Triethylvinylsilane |                              |               |
|                     | FLAM. LIQ. 3; SKIN IRRIT. 2; | <= 100 %      |
|                     | EYE IRRIT. 2A; STOT SE 3;    |               |
|                     | H226, H315, H319, H335       |               |

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

#### SECTION 4. FIRST-AID MEASURES

#### **DESCRIPTION OF FIRST AID MEASURES**

| GENERAL ADVICE             | CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA<br>SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT<br>OF DANGEROUS AREA.        |
|----------------------------|---|
| IF INHALED                 | IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF<br>NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.<br>CONSULT A PHYSICIAN. |
| IN CASE OF SKIN<br>CONTACT | WASH OFF WITH SOAP AND PLENTY OF WATER.<br>CONSULT A PHYSICIAN.   |

| IN CASE OF EYE<br>CONTACT  | RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.  |
|--|---|
| IF SWALLOWED   | DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING<br>BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE<br>MOUTH WITH WATER. CONSULT A PHYSICIAN. |
| MOST IMPORTANT<br>SYMPTOMS AND<br>EFFECTS, BOTH ACUTE<br>AND DELAYED                   | THE MOST IMPORTANT KNOWN SYMPTOMS AND<br>EFFECTS ARE DESCRIBED IN THE LABELLING (SEE<br>SECTION 2.2) AND/OR IN SECTION 11.        |
| INDICATION OF ANY<br>IMMEDIATE MEDICAL<br>ATTENTION AND<br>SPECIAL TREATMENT<br>NEEDED | NO DATA AVAILABLE   |

# SECTION 5. FIRE AND EXPLOSION DATA

#### EXTINGUISHING MEDIA

| SUITABLE<br>EXTINGUISHING MEDIA                             | SUITABLE EXTINGUISHING MEDIA<br>DRY POWDER DRY SAND                        |
|---|--|
|   | UNSUITABLE EXTINGUISHING MEDIA<br>DO NOT USE WATER JET.                    |
| SPECIAL HAZARDS<br>ARISING FROM THE<br>SUBSTANCE OR MIXTURE | CARBON OXIDES, SILICON OXIDES  |
| ADVICE FOR<br>FIREFIGHTERS                                  | WEAR SELF CONTAINED BREATHING APPARATUS FOR<br>FIRE FIGHTING IF NECESSARY. |
| FURTHER INFORMATION   | USE WATER SPRAY TO COOL UNOPENED CONTAINERS.                               |

# SECTION 6. ACCIDENTAL RELEASE MEASURES

| PERSONAL      | USE PERSONAL PROTECTIVE EQUIPMENT. AVOID    |
|---------------|---|
| PRECAUTIONS,  | BREATHING VAPOURS, MIST OR GAS. ENSURE      |
| PROTECTIVE    | ADEQUATE VENTILATION. REMOVE ALL SOURCES OF |
| EQUIPMENT AND | IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. |
| EMERGENCY     | BEWARE OF VAPOURS ACCUMULATING TO FORM      |
| PROCEDURES    | EXPLOSIVE CONCENTRATIONS. VAPOURS CAN       |
|               | ACCUMULATE IN LOW AREAS.                    |
|               | FOR PERSONAL PROTECTION SEE SECTION 8.      |

| ENVIRONMENTAL<br>PRECAUTIONS                                   | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE<br>TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.  |
|--|--|
| METHODS AND<br>MATERIALS FOR<br>CONTAINMENT AND<br>CLEANING UP | CONTAIN SPILLAGE, AND THEN COLLECT WITH NON-<br>COMBUSTIBLE ABSORBENT MATERIAL, (E.G. SAND,<br>EARTH, DIATOMACEOUS EARTH, VERMICULITE) AND<br>PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO<br>LOCAL / NATIONAL REGULATIONS (SEE SECTION 13). |
| REFERENCE TO OTHER<br>SECTIONS                                 | FOR DISPOSAL SEE SECTION 13.   |

#### SECTION 7. HANDLING AND STORAGE

| PRECAUTIONS FOR SAFE<br>HANDLING                                   | AVOID CONTACT WITH SKIN AND EYES. AVOID<br>INHALATION OF VAPOUR OR MIST.<br>KEEP AWAY FROM SOURCES OF IGNITION - NO<br>SMOKING.TAKE MEASURES TO PREVENT THE BUILD<br>UP OF ELECTROSTATIC CHARGE.<br>FOR PRECAUTIONS SEE SECTION 2.2. |
|--|--|
| CONDITIONS FOR SAFE<br>STORAGE, INCLUDING<br>ANY INCOMPATIBILITIES | KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND<br>WELL-VENTILATED PLACE. CONTAINERS WHICH ARE<br>OPENED MUST BE CAREFULLY RESEALED AND KEPT<br>UPRIGHT TO PREVENT LEAKAGE.   |
| SPECIFIC END USE(S)  | Store at RT<br>APART FROM THE USES MENTIONED IN SECTION 1.2<br>NO OTHER SPECIFIC USES ARE STIPULATED.  |

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### CONTROL PARAMETERS

**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS** CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

#### **EXPOSURE CONTROLS**

| APPROPRIATE | HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL |
|-------------|---|
| ENGINEERING | HYGIENE AND SAFETY PRACTICE. WASH HANDS   |
| CONTROLS    | BEFORE BREAKS AND AT THE END OF WORKDAY.  |

PERSONAL PROTECTIVE EQUIPMENT

- **EYE/FACE PROTECTION** FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).
- SKIN PROTECTIONHANDLE WITH GLOVES. GLOVES MUST BE INSPECTED<br/>PRIOR TO USE. USE PROPER GLOVE REMOVAL<br/>TECHNIQUE (WITHOUT TOUCHING GLOVE''S OUTER<br/>SURFACE) TO AVOID SKIN CONTACT WITH THIS<br/>PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER<br/>USE IN ACCORDANCE WITH APPLICABLE LAWS AND<br/>GOOD LABORATORY PRACTICES. WASH AND DRY<br/>HANDS.
- BODY PROTECTIONIMPERVIOUS CLOTHING, FLAME RETARDANT<br/>ANTISTATIC PROTECTIVE CLOTHING. THE TYPE OF<br/>PROTECTIVE EQUIPMENT MUST BE SELECTED<br/>ACCORDING TO THE CONCENTRATION AND AMOUNT<br/>OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC<br/>WORKPLACE.
- RESPIRATORY<br/>PROTECTIONWHERE RISK ASSESSMENT SHOWS AIR-PURIFYING<br/>RESPIRATORS ARE APPROPRIATE USE A FULL-FACE<br/>RESPIRATOR WITH MULTIPURPOSE COMBINATION (US)<br/>OR TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS<br/>A BACKUP TO ENGINEERING CONTROLS. IF THE<br/>RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE<br/>A FULL-FACE SUPPLIED AIR RESPIRATOR. USE<br/>RESPIRATORS AND COMPONENTS TESTED AND<br/>APPROVED UNDER APPROPRIATE GOVERNMENT<br/>STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

| CONTROL OF    | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO |
|---------------|--|
| ENVIRONMENTAL | DO SO. DO NOT LET PRODUCT ENTER DRAINS.        |
| EXPOSURE      |  |

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| APPEARANCE            | Colorless clear liquid |
|-----------------------|------------------------|
| ODOUR                 | NO DATA AVAILABLE      |
| ODOUR THRESHOLD       | NO DATA AVAILABLE      |
| PH                    | NO DATA AVAILABLE      |
| MELTING               |                        |
| POINT/FREEZING POINT  |                        |
| INITIAL BOILING POINT | 147 °C (Lit.)          |
| AND BOILING RANGE     |                        |
| FLASH POINT           | 25 °C                  |
| EVAPORATION RATE      | NO DATA AVAILABLE      |
| FLAMMABILITY (SOLID,  | NO DATA AVAILABLE      |
| GAS)                  |                        |

| UPPER/LOWER            | NO DATA AVAILABLE |
|------------------------|-------------------|
| FLAMMABILITY OR        |                   |
| EXPLOSIVE LIMITS       |                   |
| VAPOUR PRESSURE        | NO DATA AVAILABLE |
| VAPOUR DENSITY         | NO DATA AVAILABLE |
| RELATIVE DENSITY       | 0.77 g/mL         |
| 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 |
|                        |                   |

**OTHER SAFETY INFORMATION** NO DATA AVAILABLE

## SECTION 10. STABILITY AND REACTIVITY

| REACTIVITY                               | NO DATA AVAILABLE   |
|--|---|
| CHEMICAL STABILITY                       | STABLE UNDER RECOMMENDED STORAGE CONDITIONS.  |
| POSSIBILITY OF<br>HAZARDOUS<br>REACTIONS | VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR.  |
| CONDITIONS TO AVOID                      | HEAT, FLAMES AND SPARKS   |
| INCOMPATIBLE<br>MATERIALS                | STRONG OXIDIZING AGENTS   |
| HAZARDOUS<br>DECOMPOSITION<br>PRODUCTS   | HAZARDOUS DECOMPOSITION PRODUCTS FORMED<br>UNDER FIRE CONDITIONS CARBON OXIDES, SILICON<br>OXIDES<br>OTHER DECOMPOSITION PRODUCTS - NO DATA<br>AVAILABLE<br>IN THE EVENT OF FIRE: SEE SECTION 5 |

## SECTION 11. TOXICOLOGICAL INFORMATION

#### INFORMATION ON TOXICOLOGICAL EFFECTS

| ACUTE TOXICITY   | NO DATA AVAILABLE  |
|--|--|
|  | INHALATION: NO DATA AVAILABLE  |
|  | DERMAL: NO DATA AVAILABLE  |
|  | NO DATA AVAILABLE  |
| SKIN<br>CORROSION/IRRITATION                             | NO DATA AVAILABLE  |
| SERIOUS EYE<br>DAMAGE/EYE IRRITATION                     | NO DATA AVAILABLE  |
| RESPIRATORY OR SKIN<br>SENSITISATION                     | NO DATA AVAILABLE  |
| GERM CELL<br>MUTAGENICITY                                | NO DATA AVAILABLE  |
| <b>CARCINOGENICITY</b><br>IARC:<br>NTP:                  | NO COMPONENT OF THIS PRODUCT PRESENT AT<br>LEVELS GREATER THAN OR EQUAL TO 0.1% IS<br>IDENTIFIED AS PROBABLE, POSSIBLE OR<br>CONFIRMED HUMAN CARCINOGEN BY IARC.<br>NO COMPONENT OF THIS PRODUCT PRESENT AT<br>LEVELS GREATER THAN OR EQUAL TO 0.1% IS |
| OSHA:  | IDENTIFIED AS A KNOWN OR ANTICIPATED<br>CARCINOGEN BY NTP.<br>NO COMPONENT OF THIS PRODUCT PRESENT AT<br>LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON<br>OSHA S LIST OF REGULATED CARCINOGENS.   |
| REPRODUCTIVE TOXICITY                                    | NO DATA AVAILABLE  |
| SPECIFIC TARGET ORGAN<br>TOXICITY - SINGLE<br>EXPOSURE   | INHALATION - MAY CAUSE RESPIRATORY<br>IRRITATION.  |
| SPECIFIC TARGET ORGAN<br>TOXICITY - REPEATED<br>EXPOSURE | NO DATA AVAILABLE  |
| ASPIRATION HAZARD  | NO DATA AVAILABLE  |
| ADDITIONAL<br>INFORMATION                                | RTECS: NOT AVAILABLE   |
|  | TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL,<br>PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE<br>NOT BEEN THOROUGHLY INVESTIGATED.  |

#### SECTION 12. ECOLOGICAL INFORMATION

| TOXICITY                              | NO DATA AVAILABLE   |
|---------------------------------------|---|
| PERSISTENCE AND<br>DEGRADABILITY      | NO DATA AVAILABLE   |
| BIOACCUMULATIVE<br>POTENTIAL          | NO DATA AVAILABLE   |
| MOBILITY IN SOIL                      | NO DATA AVAILABLE   |
| RESULTS OF PBT AND<br>VPVB ASSESSMENT | PBT/VPVB ASSESSMENT NOT AVAILABLE AS<br>CHEMICAL SAFETY ASSESSMENT NOT<br>REQUIRED/NOT CONDUCTED. |
| OTHER ADVERSE EFFECTS                 | NO DATA AVAILABLE   |

#### SECTION 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**PRODUCT**OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS<br/>TO A LICENSED DISPOSAL COMPANY. BURN IN A<br/>CHEMICAL INCINERATOR EQUIPPED WITH AN<br/>AFTERBURNER AND SCRUBBER BUT EXERT EXTRA<br/>CARE IN IGNITING AS THIS MATERIAL IS HIGHLY<br/>FLAMMABLE. CONTACT A LICENSED PROFESSIONAL<br/>WASTE DISPOSAL SERVICE TO DISPOSE OF THIS<br/>MATERIAL.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGING

SECTION 14. TRANSPORT INFORMATION

| DOT (US)              |   |
|-----------------------|---|
| PROPER SHIPPING NAME: | FLAMMABLE LIQUIDS, N.O.S. (Triethylvinylsilane) |
| UN NUMBER:            | 1993  |
| CLASS:                | 3   |
| PACKING GROUP:        | III   |
| REPORTABLE QUANTITY   |   |
| (RQ):                 |   |

| POISON INHALATION<br>HAZARD:   | NO  |
|--|---|
| IMDG<br>PROPER SHIPPING NAME:<br>UN NUMBER:<br>CLASS:<br>PACKING GROUP:<br>EMS-NO: | FLAMMABLE LIQUIDS, N.O.S. (Triethylvinylsilane)<br>1993<br>3<br>III<br>F-E, S-E |
| <b>IATA</b><br>PROPER SHIPPING NAME:<br>UN NUMBER:<br>CLASS:<br>PACKING GROUP:     | FLAMMABLE LIQUIDS, N.O.S. (Triethylvinylsilane)<br>1993<br>3<br>III             |

# SECTION 15. REGULATORY INFORMATION

| SARA 302 COMPONENTS   | NO CHEMICALS IN THIS MA<br>THE REPORTING REQUIREN<br>SECTION 302.                                   |                      |
|---|---|----------------------|
| SARA 313 COMPONENTS   | THIS MATERIAL DOES NOT<br>COMPONENTS WITH KNOW<br>EXCEED THE THRESHOLD (<br>LEVELS ESTABLISHED BY S | N CAS NUMBERS THAT   |
| SARA 311/312 HAZARDS  | FIRE HAZARD   |                      |
| MASSACHUSETTS RIGHT TO KNOW COMPONENTS<br>NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT. |   |                      |
| PENNSYLVANIA RIGHT TO KNOW COMPONENTS   |   |                      |
|   | CAS-NO.   | <b>REVISION DATE</b> |
| Triethylvinylsilane   | 1112-54-<br>5   |                      |
| NEW JERSEY RIGHT TO KNOW COMPONENTS   |   |                      |
|   | CAS-NO.   | REVISION DATE        |
| Triethylvinylsilane   | 1112-54-<br>5   |                      |

# SECTION 16. OTHER INFORMATION

| FULL TEXT OF H-STATEME | NTS REFERRED TO UNDER SECTIONS 2 AND 3. |
|------------------------|---|
| H226                   | FLAMMABLE LIQUID AND VAPOUR.            |
| H315                   | CAUSES SKIN IRRITATION.                 |
| H319                   | CAUSES SERIOUS EYE IRRITATION.          |

| MSDS LEGEND                |   |
|----------------------------|---|
| MW:                        | MOLECULAR WEIGHT                          |
| MF:                        | MOLECULAR FORMULA                         |
| VOC:                       | VOLATILE ORGANIC COMPOUNDS                |
| ACGIH:                     | AMERICAN CONFERENCE OF GOVERNMENENTAL     |
|                            | INDUSTRIAL HYGINISTS                      |
| CAS:                       | CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER |
| OSHA:                      | OCCUPATIONAL SAFETY AND HEALTH            |
|                            | ADMINISTRATION                            |
| PEL:                       | PERMISSIBLE EXPOSURE LIMIT (OSHA)         |
| TLV:                       | THRESHOLD LIMIT VALUE (ACGIH)             |
| IMPORTANT:                 |   |
| THE INFORMATION ABOVE IS B | ELIEVED TO BE ACCURATE AND REPRESENTS THE |
|                            | Y AVAILABLE TO US. HOWEVER, WE MAKE NO    |
| WARRANTY OF MERCHANTABII   | LITY OR ANY OTHER WARRANTY, EXPRESS OR    |
|                            | LITY OK ANY OTHER WARRANTY, EXPRESS OR    |

WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. IN NO EVENT SHALL CII BE LIABLE FOR ANY CLAIMS, LOSSES, OR DAMAGES OF ANY THIRD PARTY OR FOR LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF CII HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

VERSION: 3.1.

REVISION DATE: 01/27/2017