SIGMA-ALDRICH

ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

ATTN: SAFETY DIRECTOR

EMERGENCY PHONE 1-414-273-3850

DATE 04/09/98
CUST#: 938609
PO#: 86530

RECIEVING DOCK
SCHOOLCRAFT COLLEGE
18600 HAGGERTY ROAD
LIVONIA MI 48152-3932

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - - -

CATALOG #: 13206-3
NAME: TRIETHYLAMINE, 99%

SECTION 2. - - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

CAS #: 121-44-8
MF: C6H15N
EC NO: 204-469-4

SYNONYMS
(DIETHYLAMINO)ETHANE * N,N-DIETHYLETHANAMINE * ETHANAMINE, N,N-DIETHYL- * TEN * TRIAETHYLAMIN (GERMAN) * TRIETHYLAMINE (ACGIH:DOT:OSHA) * TRIETILAMINA (ITALIAN) * UN1296 (DOT) *

SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - - -

LABEL PRECAUTIONARY STATEMENTS
FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
CORROSIVE
CAUSES BURNS.
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
READILY ABSORBED THROUGH SKIN.
LACHRYMATOR.
TARGET ORGAN(S):
NERVES
LIVER
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - -

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. - - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

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SIGMA Fluka ALDRICH Riedel-de Haën SUPELCO SIGMA DIAGNOSTICS

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EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
FLAMMABLE LIQUID.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -

REFER TO SECTION 8.

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

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
USE ONLY IN A CHEMICAL FUME HOOD.
SAFETY SHOWER AND EYE BATH.
FACESHIELD (8-INCH MINIMUM).
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
READILY ABSORBED THROUGH SKIN.
WASH THOROUGHLY AFTER HANDLING.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

APPEARANCE AND ODOR
COLORLESS TO FAINT YELLOW LIQUID

PHYSICAL PROPERTIES
BOILING POINT: 88.8 C
MELTING POINT: -115 C

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CATALOG #: 13206-3
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FLASHPOINT 20 F
- 6C

EXPLOSION LIMITS IN AIR:
UPPER 8%
LOWER 1.2%
AUTOIGNITION TEMPERATURE: 593 F 311C
VAPOR PRESSURE: 51.75MM 20 C
SPECIFIC GRAVITY: 0.726
VAPOR DENSITY: 3.5

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

STABILITY
STABLE.

INCOMPATIBILITIES
ACIDS
OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, AND NITROGEN OXIDES.

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

ACUTE EFFECTS
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.
EXPOSURE TO VAPOR, EVEN IN LOW CONCENTRATIONS, CAN CAUSE LACRIMATION, CONJUNCTIVITIS AND CORNEAL EDEMA WHEN VAPOR IS ABSORBED INTO THE TISSUE OF THE EYE. THE CORNEAL EDEMA MAY GIVE RISE TO A PERCEPTION OF A "HALO", "BLUE HAZE" OR "FOG" AROUND LIGHTS. THIS EFFECT IS USUALLY REVERSIBLE ALTHOUGH IT MAY LAST A COUPLE OF DAYS.
DIRECT CONTACT WITH THE EYE CAN CAUSE IRREVERSIBLE DAMAGE INCLUDING BLINDNESS.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER, KIDNEYS
HEART

RTECS #: YE0175000
TRIETHYLAMINE

IRRITATION DATA

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SIGMA Fluka ALDRICH Riedel-de Haën SUPELCO SIGMA DIAGNOSTICS

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SKN-RBT 10 MG/24H OPEN MLD	AMIHBC 4,119,1951
SKN-RBT 365 MG OPEN MLD	UCDS** 3/23/1970
SKN-RBT 500 MG/24H MLD	85JCAE -,434,1986
EYE-RBT 250 MG OPEN SEV	AMIHBC 4,119,1951
EYE-RBT 50 PPM/30D-I SEV	AMIHBC 3,287,1951
EYE-RBT 250 UG/24H SEV	85JCAE -,434,1986

TOXICITY DATA

ORL-RAT LD50:460 MG/KG	AMIHBC 4,119,1951
ORL-MUS LD50:546 MG/KG	HYSAAV 30(7-9),351,1965
IHL-MUS LC50:6 GM/M3	TPKVAL 7,56,1965
IPR-MUS LD50:405 MG/KG	YKKZAJ 97,1117,1977
SKN-RBT LD50:570 UL/KG	AMIHBC 4,119,1951
IHL-MAM LC50:6 GM/M3	TPKVAL 14,80,1975

TARGET ORGAN DATA
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (EXCITEMENT)
BEHAVIORAL (MUSCLE WEAKNESS)
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
LIVER (FATTY LIVER DEGENERATION)
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. - - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

DATA NOT YET AVAILABLE.

SECTION 13. - - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

EUROPEAN INFORMATION
EC INDEX NO: 612-004-00-5
HIGHLY FLAMMABLE
CORROSIVE
R 11
HIGHLY FLAMMABLE.
R 36/37
IRRITATING TO EYES AND RESPIRATORY SYSTEM.
S 16

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KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 29
DO NOT EMPTY INTO DRAINS.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
ACGIH TLV-NOT CLASSIFIABLE AS A HUMAN CARCINOGEN DTLVS* TLV/BEI,1997
ACGIH TLV-STEL 12 MG/M3 (3 PPM) (SKIN) DTLVS* TLV/BEI,1997
ACGIH TLV-TWA 4.1 MG/M3 (1 PPM) DTLVS* TLV/BEI,1997
MSHA STANDARD-AIR:TWA 25 PPM (100 MG/M3)
DTLVS* 3,268,1971
OSHA PEL (GEN INDU):8H TWA 25 PPM (100 MG/M3)
CFRGBR 29,1910.1000,1994
OSHA PEL (CONSTRUC):8H TWA 25 PPM (100 MG/M3)
CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 25 PPM (100 MG/M3)
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 25 PPM (100 MG/M3)
CFRGBR 41,50-204.50,1994
OEL-AUSTRALIA:TWA 10 PPM (40 MG/M3);STEL 15 PPM (60 MG/M3) JAN 1993
OEL-BELGIUM:TWA 10 PPM (41 MG/M3);STEL 15 PPM (62 MG/M3) JAN 1993
OEL-DENMARK:TWA 10 PPM (40 MG/M3) JAN 1993
OEL-FINLAND:TWA 10 MG/M3;STEL 20 MG/M3;SKIN JAN 1993
OEL-FRANCE:STEL 10 PPM (40 MG/M3) JAN 1993
OEL-GERMANY:TWA 10 PPM (40 MG/M3) JAN 1993
OEL-HUNGARY:TWA 20 MG/M3;STEL 40 MG/M3 JAN 1993
OEL-THE NETHERLANDS:TWA 5 PPM (20 MG/M3);STEL 10 PPM;SKIN JAN 1993
OEL-THE PHILIPPINES:TWA 25 PPM (100 MG/M3) JAN 1993
OEL-RUSSIA:STEL 10 MG/M3;SKIN JAN 1993
OEL-SWEDEN:TWA 2 PPM (8 MG/M3);STEL 10 PPM (40 MG/M3) JAN 1993
OEL-SWITZERLAND:TWA 10 PPM (40 MG/M3);STEL 20 PPM (80 MG/M3) JAN 1993
OEL-TURKEY:TWA 25 PPM (100 MG/M3) JAN 1993
OEL-UNITED KINGDOM:TWA 10 PPM (40 MG/M3);STEL 15 PPM (60 MG/M3) JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NOHS 1974: HZD 74175; NIS 15; TNF 959; NOS 21; TNE 10558
NOES 1983: HZD X6415; NIS 1; TNF 5; NOS 1; TNE 622; TFE 55
NOES 1983: HZD 74175; NIS 74; TNF 3153; NOS 52; TNE 68091; TFE 9701
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
ON EPA IRIS DATABASE
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1997

U.S. INFORMATION
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - -

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