

MATERIAL SAFETY DATA SHEET

TRIETHANOLAMINE
CAROLINA BIOLOGICAL

Revised: 09/05/00
Replaces: None
Printed: 07/08/06

PRODUCT IDENTIFICATION

PRODUCT NAME: TRIETHANOLAMINE
COMMON SYNONYMS: 2,2',2"-NITRILOTRIETHANOL; TRIETHYLOLAMINE; TROLAMINE
CHEMICAL FAMILY: AMINE ALCOHOLS
FORMULA: C6H15O3N
FORMULA WT.: 149.19
CAS NO.: 102-71-6
NIOSH/RTECS NO.: KL9275000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 5167,9468

CHEMTREC # (800) 424-9300 NATIONAL RESPONSE CENTER # (800) 424-8802
J.T.BAKER INC. 222 RED SCHOOL LANE PHILLIPSBURG, NJ 08865 24-HOUR
EMERGENCY TELEPHONE -- (201) 859-2151

EFFECTIVE: 01/04/94 ISSUED: 04/08/95
REVISION #04

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* SYSTEM

HEALTH	-	1	SLIGHT
FLAMMABILITY	-	1	SLIGHT
REACTIVITY	-	2	MODERATE
CONTACT	-	2	MODERATE

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

CAUTION

CAUSES IRRITATION. MAY BE HARMFUL IF SWALLOWED OR INHALED.
AVOID CONTACT WITH EYES, SKIN, CLOTHING. DO NOT BREATHE VAPOR. KEEP IN
TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH
THOROUGHLY
AFTER HANDLING.

INTERNATIONAL LABELING

IRRITATING TO SKIN.
AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF SOAP AND WATER.

SAF-T-DATA* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

COMPONENTS

COMPONENT	CAS NO.	WEIGHT %	OSHA/PEL
ACGIH/TLV			
TRIETHANOLAMINE	102-71-6	98-100	N/E N/E

PHYSICAL DATA

BOILING POINT: 335 C (635 F) VAPOR PRESSURE (MMHG): <0.1
(AT 760 MM HG) (20 C)

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MELTING POINT: 21 C (69 F)
(AT 760 MM HG)

VAPOR DENSITY (AIR=1): 5.2

SPECIFIC GRAVITY: 1.12
(H2O=1)

EVAPORATION RATE: <0.1
(BUTYL ACETATE = 1)

SOLUBILITY(H2O): COMPLETE (100%)

% VOLATILES BY VOLUME: 0
(21 C)

PH: N/A

ODOR THRESHOLD (P.P.M.): N/A

PHYSICAL STATE: LIQUID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: COLORLESS TO YELLOW VISCOUS LIQUID. AMMONIA ODOR.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (CLOSED CUP): 208 C (407 F)

NFPA 704M RATING: 1-1-1

AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: UPPER - N/A LOWER - 1.3 %

FIRE EXTINGUISHING MEDIA

USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE-FIGHTING PROCEDURES

FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED

BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE

MODE. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK.

USE

WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS

NONE IDENTIFIED. CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRE OR EXPLOSION.

TOXIC GASES PRODUCED

OXIDES OF NITROGEN, CARBON MONOXIDE, CARBON DIOXIDE

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT

NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE

NONE IDENTIFIED.

HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (TLV/TWA): NOT ESTABLISHED

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

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PERMISSIBLE EXPOSURE LIMIT (PEL): NOT ESTABLISHED

TOXICITY OF COMPONENTS

ORAL RAT LD50 FOR TRIETHANOLAMINE 8680
MG/KG
INTRAPERITONEAL MOUSE LD50 FOR TRIETHANOLAMINE 1450
MG/KG
CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

CARCINOGENICITY
NONE IDENTIFIED.

REPRODUCTIVE EFFECTS
NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: COUGHING, DIFFICULT BREATHING
SKIN CONTACT: IRRITATION
EYE CONTACT: IRRITATION
SKIN ABSORPTION: NONE IDENTIFIED
INGESTION: NAUSEA, VOMITING, IRRITATION AND BURNS TO MOUTH AND
STOMACH
CHRONIC EFFECTS: KIDNEY DAMAGE, LIVER DAMAGE

TARGET ORGANS
EYES, SKIN, KIDNEYS, LIVER

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
NONE IDENTIFIED

PRIMARY ROUTES OF ENTRY
EYE CONTACT, SKIN CONTACT, INGESTION, INHALATION

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CALL A PHYSICIAN. IF SWALLOWED, IF CONSCIOUS, GIVE
LARGE

AMOUNTS OF WATER. INDUCE VOMITING.

INHALATION: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING,
GIVE

ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT,
GIVE
OXYGEN. PROMPT ACTION IS ESSENTIAL.

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY

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OF

WATER FOR AT LEAST 15 MINUTES.

EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY
OF

WATER FOR AT LEAST 15 MINUTES.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

ACUTE: YES CHRONIC: YES FLAMMABILITY: NO PRESSURE: NO REACTIVITY: NO

EXTREMELY HAZARDOUS SUBSTANCE: NO
CERCLA HAZARDOUS SUBSTANCE: NO
SARA 313 TOXIC CHEMICALS: NO
TSCA INVENTORY: YES

REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT
OCCUR

CONDITIONS TO AVOID: AIR, LIGHT, HEAT

INCOMPATIBLES: COPPER, BRASS, BRONZE, STRONG ACIDS, STRONG
OXIDIZING AGENTS, ZINC, ALUMINUM, MINERAL ACIDS

DECOMPOSITION PRODUCTS: OXIDES OF NITROGEN, CARBON MONOXIDE, CARBON
DIOXIDE

SPILL & DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE

WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE
CLOTHING. STOP

LEAK IF YOU CAN DO SO WITHOUT RISK. USE WATER SPRAY TO REDUCE
VAPORS.

TAKE UP WITH SAND OR OTHER NON-COMBUSTIBLE ABSORBENT MATERIAL AND
PLACE

INTO CONTAINER FOR LATER DISPOSAL. FLUSH SPILL AREA WITH WATER.

DISPOSAL PROCEDURE

DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL
ENVIRONMENTAL REGULATIONS.

INDUSTRIAL PROTECTIVE EQUIPMENT

VENTILATION: USE ADEQUATE GENERAL OR LOCAL EXHAUST

VENTILATION TO

KEEP VAPOR AND MIST LEVELS AS LOW AS POSSIBLE.

RESPIRATORY PROTECTION: NONE REQUIRED WHERE ADEQUATE VENTILATION
CONDITIONS

EXIST. IF AIRBORNE CONCENTRATION IS HIGH, USE
AN

APPROPRIATE RESPIRATOR OR DUST MASK.

EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, APRON, NEOPRENE

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GLOVESARE

RECOMMENDED.

STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA. ISOLATE FROM INCOMPATIBLE MATERIALS. STORE IN LIGHT-RESISTANT CONTAINERS.

SPECIAL PRECAUTIONS

PRODUCT MAY SOLIDIFY AT ROOM TEMPERATURE.

TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)
MARINE POLLUTANTS: NO

AIR (I.C.A.O.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)

U.S. CUSTOMS HARMONIZATION NUMBER: 29221300006

NOTE: WHEN HANDLING LIQUID PRODUCTS, SECONDARY PROTECTIVE CONTAINERS MUST BE USED FOR CARRYING. N/A = NOT APPLICABLE, OR NOT AVAILABLE N/E = NOT ESTABLISHED. THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET MEETS THE REQUIREMENTS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT AND REGULATIONS PROMULGATED THEREUNDER (29 CFR 1910.1200 ET. SEQ.) AND THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PERSON TRAINED IN, OR SUPERVISED BY A PERSON TRAINED IN, CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS AND DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION. DEPENDING ON USAGE, PROTECTIVE CLOTHING INCLUDING EYE AND FACE GUARDS AND RESPIRATORS MUST BE USED TO AVOID CONTACT WITH MATERIAL OR BREATHING CHEMICAL VAPORS/FUMES. EXPOSURE TO THIS PRODUCT MAY HAVE SERIOUS ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, BAKER CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH OTHER CHEMICALS OR MATERIALS. BAKER WARRANTS THAT THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE LABEL. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE. THE USER SHOULD RECOGNIZE THAT THIS PRODUCT CAN CAUSE SEVERE INJURY AND EVEN DEATH, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDED. READ ALL PRECAUTIONARY

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INFORMATION. AS NEW DOCUMENTED GENERAL SAFETY INFORMATION BECOMES AVAILABLE, BAKER WILL PERIODICALLY REVISE THIS MATERIAL SAFETY DATA SHEET. NOTE: CHEMTREC, CANUTEC, AND NATIONAL RESPONSE CENTER EMERGENCY TELEPHONE NUMBERS ARE TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS. ALL NON-EMERGENCY QUESTIONS SHOULD BE DIRECTED TO CUSTOMER SERVICE (1-800-JTBAKER ASSISTANCE. COPYRIGHT 1995 J.T.BAKER INC. * TRADEMARKS OF J.T.BAKER INC. APPROVED BY QUALITY ASSURANCE DEPARTMENT.