MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 19470
NAME: TERT-BUTANOL

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 75-65-0
MF: C₄H₁₀O
EC NO: 200-889-7
SYNONYMS
ALCOOL BUTYLIQUE TERTIAIRE (FRENCH) * T-BUTANOL * TERT-BUTANOL *
BUTANOL TERTIAIRE (FRENCH) * TERT-BUTYL ALCOHOL (OSHA) * T-BUTYL
HYDROXIDE * 1,1-DIMETHYLETHANOL * METHANOL, TRIMETHYL- * 2-METHYL-2-
PROPANOL * 2-METHYLPROPAOL-2-OL * NCI-C55367 * 2-PROPANOL, 2-METHYL- *
TRIMETHYLCARBINOL * TRIMETHYL METHANOL *

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS
FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
TOXIC
MAY IMPAIR FERTILITY.
HARMFUL BY INHALATION.
IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
RISK OF SERIOUS DAMAGE TO EYES.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.

SECTION 4. FIRST-AID MEASURES

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS
AMOUNTS OF WATER.
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF
WATER FOR AT LEAST 15 MINUTES.
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.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
WATER MAY BE EFFECTIVE FOR COOLING, BUT MAY NOT EFFECT EXTINGUISHMENT.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
EXTREMELY FLAMMABLE.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND
FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.
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 AN ACTIVATED CARBON ADSORBENT, TAKE UP AND PLACE IN CLOSED
CONTAINERS. 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.
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
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 LIQUID

PHYSICAL PROPERTIES
MELTING POINT: 23 TO 26C
FLASHPOINT 51.80F
11C

EXPLOSION LIMITS IN AIR:
UPPER 8%
LOWER 2.4%

AUTOIGNITION TEMPERATURE: 896 F 479C

VAPOR PRESSURE: 31MM 20 C 44MM 26 C
SPECIFIC GRAVITY: 0.790
VAPOR DENSITY: 2.5

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

INCOMPATIBILITIES
ACIDS
ACID CHLORIDES
ACID ANHYDRIDES
OXIDIZING AGENTS
HEAT

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -
ACUTE EFFECTS
HARMFUL IF INHALED.
MAY BE HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
CAUSES SEVERE EYE IRRITATION.
CAUSES SKIN IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. CAN CAUSE CNS DEPRESSION. EXPOSURE CAN CAUSE: GASTROINTESTINAL DISTURBANCES

CHRONIC EFFECTS MAY CAUSE REPRODUCTIVE DISORDERS. THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP OR EPA CLASSIFICATION.

TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER
KIDNEYS
BLOOD

RTECS #: E01925000
TERT-BUTYL ALCOHOL

TOXICITY DATA
O RL-RAT LD50:3500 MG/KG SCIEAS 116,663,1952
IPR-MUS LD50:399 MG/KG RCOCB8 26,75,1979
IVN-MUS LD50:1538 MG/KG AIP1TAK 135,330,1962
O RL-RBT LD50:3559 MG/KG IMSUAI 41,31,1972

TARGET ORGAN DATA
LIVER  (OTHER CHANGES)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
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 FLUKA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -
EUROPEAN INFORMATION
EC INDEX NO: 603-005-00-1
HIGHLY FLAMMABLE
TOXIC
R 11
HIGHLY FLAMMABLE.
R 20
HARMFUL BY INHALATION.
S 9
KEEP CONTAINER IN A WELL-VENTILATED PLACE.
S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
ACGIH TLV-NOT CLASSIFIABLE AS A HUMAN CARCINOGEN DTLVS* TLV/BEI,1997
ACGIH TLV-TWA 303 MG/M3 (100 PPM) DTLVS* TLV/BEI,1997
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION
FEREAC 54,7740,1989
MSHA STANDARD-AIR:TWA 100 PPM (300 MG/M3)
DTLV5* 3,32,1971
OSHA PEL (GEN INDU):8H TWA 100 PPM (300 MG/M3)
CFRBR 29,1910.1000,1994
OSHA PEL (CONSTRUCT):8H TWA 100 PPM (300 MG/M3)
CFRBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 100 PPM (300 MG/M3)
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 100 PPM (300 MG/M3)
CFRGBR 41,50-204.50,1994
OEL-AUSTRALIA:TWA 100 PPM (300 MG/M3); STEL 150 PPM (450 MG/M3) JAN 1993
OEL-AUSTRIA:TWA 100 PPM (300 MG/M3) JAN 1993
OEL-BELGIUM:TWA 100 PPM (303 MG/M3); STEL 150 PPM (455 MG/M3) JAN 1993
OEL-DENMARK:TWA 50 PPM (150 MG/M3); SKIN JAN 1993
OEL-FRANCE:TWA 100 PPM (300 MG/M3) JAN 1993
OEL-GERMANY:TWA 100 PPM (300 MG/M3) JAN 1993
OEL-THE NETHERLANDS:TWA 100 PPM (300 MG/M3) JAN 1993
OEL-THE PHILIPPINES:TWA 100 PPM (300 MG/M3) JAN 1993
OEL-SWEDEN:TWA 50 PPM (150 MG/M3); STEL 75 PPM (250 MG/M3); SKIN JAN 1993
OEL-SWITZERLAND:TWA 100 PPM (300 MG/M3); STEL 200 PPM (600 MG/M3) JAN 1993
OEL-TURKEY:TWA 100 PPM (300 MG/M3) JAN 1993
OEL-UNITED KINGDOM:TWA 100 PPM (300 MG/M3); STEL 150 PPM JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO T-BUTYL ALCOHOL-AIR:10H TWA 100 PPM; STEL 150 PPM
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 14400; NIS 11; TNE 820; NOS 25; TNE 3121
NOES 1983: HZD 14400; NIS 128; TNE 10682; NOS 84; TNE 171420; TFE 26045
EPA GENETOX PROGRAM 1988, NEGATIVE: N CRASSA-REVERSION
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, DECEMBER 1998
NIOSH ANALYTICAL METHOD, 1994: ALCOHOLS I, 1400
NTP CARCINOGENESIS STUDIES (DRINKING WATER); SOME EVIDENCE: MOUSE, RAT
NTPTR* NTP-TR-436,95
NTP TOXICITY STUDIES, RPT# TOX-53, NOVEMBER 1998
U.S. INFORMATION
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.
SECTION 16. - - - - - - - - OTHER INFORMATION- - - - - - - - - - - - -
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