

J.T.BAKER INC. 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865
M A T E R I A L S A F E T Y D A T A S H E E T
24-HOUR EMERGENCY TELEPHONE -- (908) 859-2151
CHEMTREC # (800) 424-9300 -- NATIONAL RESPONSE CENTER # (800) 424-8802

B6184 -05
EFFECTIVE: 01/04/94

BUTYL ACETATE

PAGE: 1
ISSUED: 01/15/94

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SECTION I - PRODUCT IDENTIFICATION

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PRODUCT NAME: BUTYL ACETATE
COMMON SYNONYMS: N-BUTYL ACETATE; BUTYL ETHANOATE; ACETIC ACID BUTYL ESTER
CHEMICAL FAMILY: ESTERS
FORMULA: CH3COOCH2CH2CH2CH3
FORMULA WT.: 116.16
CAS NO.: 123-86-4
NIOSH/RTECS NO.: AF7350000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 9161,9164,9159,D683,5365,9171,9160,9191

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PRECAUTIONARY LABELING

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BAKER SAF-T-DATA* SYSTEM

HEALTH	-	1	SLIGHT
FLAMMABILITY	-	3	SEVERE (FLAMMABLE)
REACTIVITY	-	1	SLIGHT
CONTACT	-	1	SLIGHT

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER

U.S. PRECAUTIONARY LABELING

WARNING

FLAMMABLE. CAUSES IRRITATION. HARMFUL IF SWALLOWED OR INHALED.
KEEP AWAY FROM HEAT, SPARKS, FLAME. AVOID CONTACT WITH EYES, SKIN, CLOTHING.
AVOID BREATHING VAPOR. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE
VENTILATION. WASH THOROUGHLY AFTER HANDLING. IN CASE OF FIRE, USE ALCOHOL
FOAM, DRY CHEMICAL, CARBON DIOXIDE - WATER MAY BE INEFFECTIVE. FLUSH SPILL
AREA WITH WATER SPRAY.

INTERNATIONAL LABELING

FLAMMABLE.
AVOID CONTACT WITH EYES. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH
PLENTY OF WATER. KEEP CONTAINER TIGHTLY CLOSED.

CONTINUED ON PAGE: 2

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PRECAUTIONARY LABELING (CONTINUED)

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SAF-T-DATA* STORAGE COLOR CODE: RED (FLAMMABLE)

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SECTION II - COMPONENTS

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<u>COMPONENT</u>	<u>CAS NO.</u>	<u>WEIGHT %</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
N-BUTYL ACETATE	123-86-4	90-100	150 PPM	150 PPM

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SECTION III - PHYSICAL DATA

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BOILING POINT: 126 C (258 F)
(AT 760 MM HG)

VAPOR PRESSURE (MMHG): 8
(20 C)

MELTING POINT: -74 C (-101 F)
(AT 760 MM HG)

VAPOR DENSITY (AIR=1): 4.0

SPECIFIC GRAVITY: 0.88
(H2O=1)

EVAPORATION RATE: 1.0
(BUTYL ACETATE = 1)

SOLUBILITY(H2O): SLIGHT (0.1-1%)

% VOLATILES BY VOLUME: 100
(21 C)

PH: N/A

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

PHYSICAL STATE: LIQUID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: CLEAR, NEARLY COLORLESS LIQUID. FRUITY ODOR.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT (CLOSED CUP): 24 C (76 F)

NFPA 704M RATING: 1-3-0

AUTOIGNITION TEMPERATURE: 424 C (797 F)

FLAMMABLE LIMITS: UPPER - 7.6 % LOWER - 1.7 %

CONTINUED ON PAGE: 3

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA (CONTINUED)

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FIRE EXTINGUISHING MEDIA

USE ALCOHOL FOAM, DRY CHEMICAL OR CARBON DIOXIDE. (WATER MAY BE INEFFECTIVE.)

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

VAPORS MAY FLOW ALONG SURFACES TO DISTANT IGNITION SOURCES AND FLASH BACK. CLOSED CONTAINERS EXPOSED TO HEAT MAY EXPLODE. CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRE.

TOXIC GASES PRODUCED

CARBON MONOXIDE, CARBON DIOXIDE

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT

NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE

NONE IDENTIFIED.

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SECTION V - HEALTH HAZARD DATA

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THRESHOLD LIMIT VALUE (TLV/TWA): 710 MG/M (150 PPM)

SHORT-TERM EXPOSURE LIMIT (STEL): 950 MG/M (200 PPM)

PERMISSIBLE EXPOSURE LIMIT (PEL): 710 MG/M (150 PPM)

TOXICITY OF COMPONENTS

ORAL RAT LD50 FOR N-BUTYL ACETATE

14 G/KG

INHALATION-4HR RAT LC50 FOR N-BUTYL ACETATE

2000 PPM

INTRAPERITONEAL MOUSE LD50 FOR N-BUTYL ACETATE

1230 MG/KG

CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

CONTINUED ON PAGE: 4

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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CARCINOGENICITY

NONE IDENTIFIED.

REPRODUCTIVE EFFECTS

NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: IRRITATION OF MUCOUS MEMBRANES, HEADACHE, NAUSEA,
VOMITING, DIZZINESS, DROWSINESS, IRRITATION OF UPPER
RESPIRATORY TRACT, UNCONSCIOUSNESS, MAY CAUSE NARCOSIS

SKIN CONTACT: IRRITATION, PROLONGED CONTACT MAY CAUSE DERMATITIS

EYE CONTACT: IRRITATION, MAY CAUSE TEMPORARY CORNEAL DAMAGE

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: HEADACHE, NAUSEA, VOMITING, DIZZINESS, GASTROINTESTINAL
IRRITATION, CENTRAL NERVOUS SYSTEM DEPRESSION

CHRONIC EFFECTS: NONE IDENTIFIED

TARGET ORGANS

EYES, SKIN, RESPIRATORY SYSTEM, CENTRAL NERVOUS SYSTEM, MUCOUS MEMBRANES

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

DAMAGED SKIN, RESPIRATORY SYSTEM DISEASE

PRIMARY ROUTES OF ENTRY

INHALATION, INGESTION, EYE CONTACT, SKIN CONTACT

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.

SKIN CONTACT: IN CASE OF CONTACT, FLUSH SKIN WITH WATER.

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PAGE: 5
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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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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: YES PRESSURE: NO REACTIVITY: NO

EXTREMELY HAZARDOUS SUBSTANCE: NO
CERCLA HAZARDOUS SUBSTANCE: YES CONTAINS BUTYL ACETATE (RQ = 5000 LBS)
SARA 313 TOXIC CHEMICALS: NO
TSCA INVENTORY: YES

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SECTION VI - REACTIVITY DATA

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STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, FLAME, OTHER SOURCES OF IGNITION

INCOMPATIBLES: STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG BASES

DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE

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SECTION VII - SPILL & DISPOSAL PROCEDURES

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

WEAR SUITABLE PROTECTIVE CLOTHING. SHUT OFF IGNITION SOURCES; NO FLARES,
SMOKING, OR FLAMES IN AREA. 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
AREA WITH WATER.

J. T. BAKER SOLUSORB(R) SOLVENT ADSORBENT IS RECOMMENDED FOR SPILLS OF THIS
PRODUCT.

DISPOSAL PROCEDURE

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

CONTINUED ON PAGE: 6

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SECTION VII - SPILL & DISPOSAL PROCEDURES (CONTINUED)

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EPA HAZARDOUS WASTE NUMBER: D001 (IGNITABLE WASTE)

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

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VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS UP TO 1000 PPM, A CHEMICAL CARTRIDGE RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE IS RECOMMENDED. ABOVE THIS LEVEL, A SELF-CONTAINED BREATHING APPARATUS IS RECOMMENDED.

EYE/SKIN PROTECTION: SAFETY GOGGLES, RUBBER GLOVES ARE RECOMMENDED.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS

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SAF-T-DATA* STORAGE COLOR CODE: RED (FLAMMABLE)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL, DRY, WELL-VENTILATED, FLAMMABLE LIQUID STORAGE AREA.

SPECIAL PRECAUTIONS

BOND AND GROUND CONTAINERS WHEN TRANSFERRING LIQUID.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: BUTYL ACETATES

HAZARD CLASS: 3

UN/NA: UN1123 REPORTABLE QUANTITY: 5000 LBS. PACKAGING GROUP: III

LABELS: 3 FLAMMABLE LIQUID

REGULATORY REFERENCES: 49CFR 172.101

CONTINUED ON PAGE: 7

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

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INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: BUTYL ACETATES

HAZARD CLASS: 3.3

UN: UN1123 MARINE POLLUTANTS: NO

LABELS: FLAMMABLE LIQUID

REGULATORY REFERENCES: 49CFR PART 176; IMDG CODE

I.M.O. PAGE: 3314

PACKAGING GROUP: III

AIR (I.C.A.O.)

PROPER SHIPPING NAME: BUTYL ACETATES

HAZARD CLASS: 3

UN: UN1123

LABELS: FLAMMABLE LIQUID

REGULATORY REFERENCES: 49CFR PART 175; ICAO=== WE BELIEVE THE TRANSPORTATION DATA AND REFERENCES CONTAINED HEREIN TO BE FACTUAL AND THE OPINION OF QUALIFIED EXPERTS. THE DATA IS MEANT AS A GUIDE TO THE OVERALL CLASSIFICATION OF THE PRODUCT AND IS NOT PACKAGE SIZE SPECIFIC, NOR SHOULD IT BE TAKEN AS A WARRANTY OR REPRESENTATION FOR WHICH THE COMPANY ASSUMES LEGAL RESPONSIBILITY.=== THE INFORMATION IS OFFERED SOLELY FOR YOUR CONSIDERATION, INVESTIGATION, AND VERIFICATION. ANY USE OF THE INFORMATION MUST BE DETERMINED BY THE USER TO BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. SEE SHIPPER REQUIREMENTS 49CFR 171.2, CERTIFICATION 172.204, AND EMPLOYEE TRAINING 49 CFR 173.1(B).

PACKAGING GROUP: III

U.S. CUSTOMS HARMONIZATION NUMBER: 29153300001

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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

CONTINUED ON PAGE: 8

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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 HEEDDED. READ ALL PRECAUTIONARY 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) FOR ASSISTANCE.

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APPROVED BY QUALITY ASSURANCE DEPARTMENT.