

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

B1476 -04  
EFFECTIVE: 01/04/94

BENZONITRILE

PAGE: 1  
ISSUED: 01/15/94

J.T.BAKER INC., 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865

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SECTION I - PRODUCT IDENTIFICATION

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PRODUCT NAME: BENZONITRILE  
COMMON SYNONYMS: PHENYL CYANIDE; CYANOBENZENE  
CHEMICAL FAMILY: NITRILES  
FORMULA: C6H5CN  
FORMULA WT.: 103.12  
CAS NO.: 100-47-0  
NIOSH/RTECS NO.: DI2450000  
PRODUCT USE: LABORATORY REAGENT  
PRODUCT CODES: B883

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PRECAUTIONARY LABELING

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BAKER SAF-T-DATA\* SYSTEM

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

LABORATORY PROTECTIVE EQUIPMENT

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

U.S. PRECAUTIONARY LABELING

WARNING

COMBUSTIBLE. CAUSES EYE IRRITATION. HARMFUL IF SWALLOWED.  
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

KEEP AWAY FROM STRONG OXIDIZING SUBSTANCES AND STRONG ACIDS. DO NOT BREATHE  
VAPOR.

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> |
|------------------|----------------|-----------------|-----------------|------------------|
| BENZONITRILE     | 100-47-0       | 90-100          | N/E             | N/E              |

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SECTION III - PHYSICAL DATA

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BOILING POINT: 190 C (374 F)  
(AT 760 MM HG)

VAPOR PRESSURE (MMHG): N/A

MELTING POINT: -13 C (8 F)  
(AT 760 MM HG)

VAPOR DENSITY (AIR=1): N/A

SPECIFIC GRAVITY: 1.01  
(H2O=1)

EVAPORATION RATE: N/A

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

% VOLATILES BY VOLUME: N/A  
(21 C)

PH: N/A

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

PHYSICAL STATE: LIQUID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: COLORLESS LIQUID. ALMOND ODOR.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT (CLOSED CUP): 71 C (161 F)

AUTOIGNITION TEMPERATURE: N/A

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

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 EXPOSED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA (CONTINUED)

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RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS

NONE IDENTIFIED.

TOXIC GASES PRODUCED

CYANIDES

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): NOT ESTABLISHED

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): NOT ESTABLISHED

TOXICITY OF COMPONENTS

ORAL MOUSE LD50 FOR BENZONITRILE

1400 MG/KG

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

CARCINOGENICITY

NONE IDENTIFIED.

REPRODUCTIVE EFFECTS

NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: MAY CAUSE CYANOSIS

SKIN CONTACT: PROLONGED CONTACT MAY CAUSE IRRITATION

EYE CONTACT: IRRITATION

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: NONE IDENTIFIED

CHRONIC EFFECTS: CENTRAL NERVOUS SYSTEM DEPRESSION

TARGET ORGANS

EYES, SKIN

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

NONE IDENTIFIED

PRIMARY ROUTES OF ENTRY

INGESTION, INHALATION, EYE CONTACT, SKIN CONTACT

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CALL A PHYSICIAN. IF SWALLOWED, IF CONSCIOUS, IMMEDIATELY  
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.

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 BENZONITRILE (RQ = 5000 LBS)

SARA 313 TOXIC CHEMICALS: NO

TSCA INVENTORY: YES

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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 OR CABINET.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: BENZONITRILE  
HAZARD CLASS: 6.1  
UN/NA: UN2224 REPORTABLE QUANTITY: 5000 LBS. PACKAGING GROUP: II  
LABELS: 6 POISON  
REGULATORY REFERENCES: 49CFR 172.101

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: BENZONITRILE  
HAZARD CLASS: 6.1 I.M.O. PAGE: 6082  
UN: UN2224 MARINE POLLUTANTS: NO PACKAGING GROUP: II  
LABELS: POISON  
REGULATORY REFERENCES: 49CFR PART 176; IMDG CODE

AIR (I.C.A.O.)

PROPER SHIPPING NAME: BENZONITRILE  
HAZARD CLASS: 6.1 PACKAGING GROUP: II  
UN: UN2224  
LABELS: POISON  
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  
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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

CFR 173.1(B).

U.S. CUSTOMS HARMONIZATION NUMBER: 29269000008

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 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.

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