

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 1
ISSUED: 01/15/94

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

=====

SECTION I - PRODUCT IDENTIFICATION

=====

PRODUCT NAME: AMMONIUM NITRATE
COMMON SYNONYMS: AMMONIUM (I) NITRATE; NITRIC ACID, AMMONIUM SALT
CHEMICAL FAMILY: AMMONIUM SALTS
FORMULA: NH_4NO_3
FORMULA WT.: 80.04
CAS NO.: 6484-52-2
NIOSH/RTECS NO.: BR9050000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 0731,0729

=====

PRECAUTIONARY LABELING

=====

BAKER SAF-T-DATA* SYSTEM

HEALTH	-	1	SLIGHT
FLAMMABILITY	-	0	NONE
REACTIVITY	-	3	SEVERE (OXIDIZER)
CONTACT	-	2	MODERATE

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT

U.S. PRECAUTIONARY LABELING

DANGER

CAUSES IRRITATION. HARMFUL IF SWALLOWED OR INHALED. STRONG OXIDIZER. CONTACT WITH COMBUSTIBLE MATERIALS, FLAMMABLE MATERIALS, OR POWDERED METALS CAN CAUSE FIRE OR EXPLOSION.

KEEP FROM CONTACT WITH CLOTHING AND OTHER COMBUSTIBLE MATERIALS. DO NOT STORE NEAR COMBUSTIBLE MATERIALS. AVOID CONTACT WITH EYES, SKIN, CLOTHING. KEEP IN TIGHTLY CLOSED CONTAINER. WASH THOROUGHLY AFTER HANDLING. IN CASE OF FIRE, SOAK WITH WATER. IN CASE OF SPILL, SWEEP UP AND REMOVE. FLUSH SPILL AREA WITH WATER.

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 2
ISSUED: 01/15/94

=====

PRECAUTIONARY LABELING (CONTINUED)

=====

INTERNATIONAL LABELING

CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE. HARMFUL BY INHALATION AND IF SWALLOWED.
KEEP AWAY FROM HEAT. KEEP AWAY FROM COMBUSTIBLE MATERIAL. AVOID CONTACT WITH SKIN.

SAF-T-DATA* STORAGE COLOR CODE: YELLOW (REACTIVE)

=====

SECTION II - COMPONENTS

=====

<u>COMPONENT</u>	<u>CAS NO.</u>	<u>WEIGHT %</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
AMMONIUM NITRATE	6484-52-2	99-100	N/E	N/E

=====

SECTION III - PHYSICAL DATA

=====

BOILING POINT: 210 C (410 F) DECOMPOSES VAPOR PRESSURE (MMHG): N/A
(AT 760 MM HG)

MELTING POINT: 170 C (338 F) VAPOR DENSITY (AIR=1): 2.8
(AT 760 MM HG)

SPECIFIC GRAVITY: 1.73 EVAPORATION RATE: N/A
(H2O=1)

SOLUBILITY(H2O): APPRECIABLE (>10%) % VOLATILES BY VOLUME: 0
(21 C)

PH: 5.4 (0.1M SOLUTION)

ODOR THRESHOLD (P.P.M.): N/A PHYSICAL STATE: SOLID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: WHITE GRANULES. ODORLESS.

CONTINUED ON PAGE: 3

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 3
ISSUED: 01/15/94

=====

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

=====

FLASH POINT (CLOSED CUP): N/A

NFPA 704M RATING: 0-0-3 OXY

AUTOIGNITION TEMPERATURE: N/A

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

FIRE EXTINGUISHING MEDIA
USE WATER SPRAY.

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

NOTE: DECOMPOSES AT BOILING POINT. STRONG OXIDIZER. CONTACT WITH COMBUSTIBLE MATERIALS, FLAMMABLE MATERIALS, OR POWDERED METALS CAN CAUSE FIRE OR EXPLOSION.

TOXIC GASES PRODUCED

AMMONIA, OXIDES OF NITROGEN

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT

YES.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE

NONE IDENTIFIED.

=====

SECTION V - HEALTH HAZARD DATA

=====

THRESHOLD LIMIT VALUE (TLV/TWA): NOT ESTABLISHED

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): NOT ESTABLISHED

TOXICITY OF COMPONENTS

C , RAT LD50 FOR AMMONIUM NITRATE

4820 MG/KG

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

A6048 -04

AMMONIUM NITRATE

PAGE: 4

EFFECTIVE: 01/04/94

ISSUED: 01/15/94

=====

SECTION V - HEALTH HAZARD DATA (CONTINUED)

=====

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

CARCINOGENICITY

NONE IDENTIFIED.

REPRODUCTIVE EFFECTS

NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: TIGHTNESS AND PAIN IN CHEST, COUGHING, DIFFICULT
BREATHING

SKIN CONTACT: IRRITATION

EYE CONTACT: IRRITATION

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: HEADACHE, NAUSEA, VOMITING, GASTROINTESTINAL IRRITATION,
CONVULSIONS, UNCONSCIOUSNESS

CHRONIC EFFECTS: NONE IDENTIFIED

TARGET ORGANS

EYES, SKIN

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

NONE IDENTIFIED

PRIMARY ROUTES OF ENTRY

INHALATION, INGESTION, SKIN CONTACT, EYE 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.

CONTINUED ON PAGE: 5

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 5
ISSUED: 01/15/94

=====

SECTION V - HEALTH HAZARD DATA (CONTINUED)

=====

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: NO

SARA 313 TOXIC CHEMICALS: YES CONTAINS AMMONIUM NITRATE

GENERIC CLASS: GENERIC CLASS REMOVED FROM CFR: 7/1/91

TSCA INVENTORY: YES

=====

SECTION VI - REACTIVITY DATA

=====

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, SHOCK, FLAME

INCOMPATIBLES: STRONG REDUCING AGENTS, COMBUSTIBLE MATERIALS, STRONG
ACIDS, ORGANIC MATERIALS, CHEMICALLY ACTIVE METALS,
POWDERED METALS

DECOMPOSITION PRODUCTS: AMMONIA, OXIDES OF NITROGEN

=====

SECTION VII - SPILL & DISPOSAL PROCEDURES

=====

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

WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. KEEP
COMBUSTIBLES (WOOD, PAPER, OIL, ETC.) AWAY FROM SPILLED MATERIAL. WITH
CLEAN SHOVEL, CAREFULLY PLACE MATERIAL INTO CLEAN, DRY CONTAINER AND
COVER; REMOVE FROM AREA. FLUSH SPILL AREA WITH WATER.

DISPOSAL PROCEDURE

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

E HAZARDOUS WASTE NUMBER: D001 (IGNITABLE WASTE)

CONTINUED ON PAGE: 6

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 6
ISSUED: 01/15/94

=====

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

=====

VENTILATION: USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION TO
KEEP FUME OR DUST 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, BUTYL RUBBER GLOVES
ARERECOMMENDED.

=====

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

=====

SAF-T-DATA* STORAGE COLOR CODE: YELLOW (REACTIVE)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. STORE SEPARATELY AND AWAY FROM FLAMMABLE
AND COMBUSTIBLE MATERIALS. ISOLATE FROM INCOMPATIBLE MATERIALS.

=====

SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

=====

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: AMMONIUM NITRATE (<0.2% COMBUSTIBLE SUBSTANCE)
HAZARD CLASS: 5.1
UN/NA: UN1942 PACKAGING GROUP: III
LABELS: 5.1 OXIDIZER
REGULATORY REFERENCES: 49CFR 172.101

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: AMMONIUM NITRATE (<0.2% COMBUSTIBLE SUBSTANCE)
HAZARD CLASS: 5.1 I.M.O. PAGE: 5122
UN: UN1942 MARINE POLLUTANTS: NO PACKAGING GROUP: III
LABELS: OXIDIZING AGENT
REGULATORY REFERENCES: 49CFR PART 176; IMDG CODE

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 7
ISSUED: 01/15/94

=====

SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

=====

AIR (I.C.A.O.)

PROPER SHIPPING NAME: AMMONIUM NITRATE (<0.2% COMBUSTIBLE SUBSTANCE)

HAZARD CLASS: 5.1

UN: UN1942

PACKAGING GROUP: III

LABELS: OXIDIZER

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).

U.S. CUSTOMS HARMONIZATION NUMBER: 28342900005

=====

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.

BE SURE 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

CONTINUED ON PAGE: 8

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

A6048 -04
EFFECTIVE: 01/04/94

AMMONIUM NITRATE

PAGE: 8
ISSUED: 01/15/94

=====

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.

COPYRIGHT 1994 J.T.BAKER INC.
* TRADEMARKS OF J.T.BAKER INC.

===

APPROVED BY QUALITY ASSURANCE DEPARTMENT.