

LAB

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
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16 -09
EFFECTIVE: 07/26/94

AMMONIUM HYDROXIDE

PAGE: 1
ISSUED: 10/08/94

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SECTION I - PRODUCT IDENTIFICATION

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PRODUCT NAME: AMMONIUM HYDROXIDE
COMMON SYNONYMS: AMMONIA AQUEOUS; AMMONIA SOLUTION; AQUA AMMONIA
CHEMICAL FAMILY: AQUEOUS SOLUTIONS
FORMULA: NH₄OH IN H₂O
FORMULA WT.: 35.05
CAS NO.: 1336-21-6
NIOSH/RTECS NO.: BQ9625000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 9742, 5138, 5838, 5820, 9730, 5817, 9719, 5358, 5350, 9733, 9741, 9731
5019, 9729, 9718, 9721, 9720, 4807

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PRECAUTIONARY LABELING

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BAKER SAF-T-DATA* SYSTEM

HEALTH	-	3	SEVERE (POISON)
FLAMMABILITY	-	1	SLIGHT
REACTIVITY	-	2	MODERATE
CONTACT	-	3	SEVERE (CORROSIVE)

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

POISON DANGER

CAUSES BURNS. HARMFUL IF INHALED. MAY BE FATAL IF SWALLOWED. EXCEPTIONAL HEALTH AND CONTACT HAZARDS: READ MATERIAL SAFETY DATA SHEET. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. DO NOT BREATHE VAPOR. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER OUT OF SUN AND AWAY FROM HEAT. IN CASE OF FIRE, USE WATER SPRAY. IN CASE OF SPILL, CAREFULLY NEUTRALIZE SPILL WITH DILUTE HCL. FLUSH SPILL AREA WITH WATER.

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PRECAUTIONARY LABELING (CONTINUED)

INTERNATIONAL LABELING

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
KEEP OUT OF REACH OF CHILDREN. IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY
WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

SAF-T-DATA* STORAGE COLOR CODE: WHITE STRIPE (STORE SEPARATELY)

SECTION II - COMPONENTS

COMPONENT	CAS NO.	WEIGHT %	OSHA/PEL	ACGIH/TLV
AMMONIUM HYDROXIDE	1336-21-6	28-30	50 PPM	25 PPM
WATER	7732-18-5	70-72	N/E	N/E

THE TLV AND PEL FOR AMMONIUM HYDROXIDE IS LISTED UNDER AMMONIA.

SECTION III - PHYSICAL DATA

BOILING POINT: 83 C (181 F)
(AT 760 MM HG)

VAPOR PRESSURE (MMHG): 570
(20 C)

MELTING POINT: -78 C (-108 F)
(AT 760 MM HG)

VAPOR DENSITY (AIR=1): 0.60

SPECIFIC GRAVITY: 0.90
(H2O=1)

EVAPORATION RATE: N/A

SOLUBILITY(H2O): COMPLETE (100%)

% VOLATILES BY VOLUME: 100
(21 C)

PH: 14.0

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

PHYSICAL STATE: LIQUID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: CLEAR, COLORLESS LIQUID. PUNGENT ODOR.

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT (CLOSED CUP): N/A NFPA 704M RATING: 3-1-0

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 EXPOSED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL; DO NOT GET WATER INSIDE CONTAINERS.

UNUSUAL FIRE & EXPLOSION HAZARDS

GIVES OFF FLAMMABLE VAPORS. VAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR. CLOSED CONTAINERS EXPOSED TO HEAT MAY EXPLODE. ANHYDROUS AMMONIA HAS THE FOLLOWING FLAMMABLE LIMITS: UPPER - 25% AND LOWER - 16%. THE AUTOIGNITION TEMPERATURE FOR AMMONIA GAS IS 1204 F.

TOXIC GASES PRODUCED
AMMONIA, OXIDES OF NITROGEN

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT
NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE
YES.

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SECTION V - HEALTH HAZARD DATA

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THE TLV AND PEL FOR AMMONIUM HYDROXIDE IS LISTED UNDER AMMONIA.

THRESHOLD LIMIT VALUE (TLV/TWA): 17 MG/M (25 PPM)

TLV IS FOR AMMONIA.

SHORT-TERM EXPOSURE LIMIT (STEL): 24 MG/M (35 PPM)

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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STEL IS FOR AMMONIA.

PERMISSIBLE EXPOSURE LIMIT (PEL): 35 MG/M (50 PPM)

PEL IS FOR AMMONIA.

TOXICITY OF COMPONENTS

ORAL RAT LD50 FOR AMMONIUM HYDROXIDE	350	MG/KG
INTRAPERITONEAL MOUSE LD50 FOR WATER	190	G/KG
INTRAVENOUS MOUSE LD50 FOR WATER	25	G/KG
CARCINOGENICITY: NTP: NO IARC: NO	Z LIST: NO	OSHA REG: NO

CARCINOGENICITY
NONE IDENTIFIED.

REPRODUCTIVE EFFECTS
NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: SEVERE IRRITATION OR BURNS OF RESPIRATORY SYSTEM,
PULMONARY EDEMA, LUNG INFLAMMATION

SKIN CONTACT: SEVERE IRRITATION OR BURNS

EYE CONTACT: SEVERE IRRITATION OR BURNS, PROLONGED CONTACT MAY CAUSE
PERMANENT CORNEAL DAMAGE, BLINDNESS

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: IS HARMFUL AND MAY BE FATAL. SEVERE BURNS TO MOUTH,
THROAT, AND STOMACH, NAUSEA, VOMITING, DIARRHEA

CHRONIC EFFECTS: NONE IDENTIFIED

TARGET ORGANS
RESPIRATORY SYSTEM, LUNGS, EYES, SKIN, MUCOUS MEMBRANES

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
SKIN DISORDERS, RESPIRATORY SYSTEM DISEASE

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