MATERIAL SAFETY DATA SHEET

SECTION 1. - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - -
CATALOG #: 443417
NAME: PYRIDINE, 99%, A.C.S. REAGENT (SAFETY CAN)

SECTION 2. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -
CAS #: 110-86-1
MF: C5H5N
EC NO: 203-809-9
SYNONYMS
AZABENZENE * AZINE * NCI-C55301 * PIRIDINA (ITALIAN) * PIRYDYNA (POLISH) * PYRIDIN (GERMAN) * PYRIDINE (ACGIH:OSHA) * RCRA WASTE NUMBER U196 *

SECTION 3. - - - - - - - HAZARDS IDENTIFICATION - - - - - - -
LABEL PRECAUTIONARY STATEMENTS
FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
HARMFUL
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
LIMITED EVIDENCE OF CARCINOGENIC EFFECT.
RISK OF SERIOUS DAMAGE TO EYES.
POSSIBLE CARCINOGEN (US)
READILY ABSORBED THROUGH SKIN.
UNPLEASANT ODOR.
TARGET ORGAN(S): LIVER
KIDNEYS
SEVERE EYE IRRITANT.
SKIN IRRITANT.
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.

SECTION 4. - - - - - - - - FIRST-AID MEASURES- - - - - - - -
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IMMEDIATELY.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. 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.

SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND
FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.
FORMS EXPLOSIVE MIXTURES IN AIR.

SECTION 6. ---------------------------------------- ACCIDENTAL RELEASE MEASURES----------------------------------------
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS
USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.

SECTION 7. ---------------------------------------- HANDLING AND STORAGE----------------------------------------
REFER TO SECTION 8.

SECTION 8. ---------------------------------------- EXPOSURE CONTROLS/PERSONAL PROTECTION----------------------------------------
SAFETY SHOWER AND EYE BATH.
USE NONSPARKING TOOLS.
USE ONLY IN A CHEMICAL FUME HOOD.
WASH THOROUGHLY AFTER HANDLING.
REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.
DO NOT BREATHE VAPOR.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
NIOSH/MSHA-APPROVED RESPIRATOR.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
CHEMICAL SAFETY GOGGLES.
KEEP CONTAINER CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.
HANDLE AND STORE UNDER ARGON.

SECTION 9. ---------------------------------------- PHYSICAL AND CHEMICAL PROPERTIES----------------------------------------
PHYSICAL PROPERTIES
BOILING POINT: 115 C
MELTING POINT: -42 C
FLASHPOINT: 68 F
EXPLOSION LIMITS IN AIR:
   UPPER 12.4%
   LOWER 1.8%
AUTOIGNITION TEMPERATURE: 899 F
VAPOR PRESSURE: 20 MM 25 C 10 MM 13.2 C
SOLUBILITY:
   WATER -Z1076
SPECIFIC GRAVITY: 0.978
VAPOR DENSITY: 2.72
ODOR THRESHOLD: < 1 PPM
FREEZING POINT: -42 C
PH: 8.5
SWISS POISON CLASS: 4

SECTION 10. ---------------------------------------- STABILITY AND REACTIVITY----------------------------------------
STABILITY
STABLE.
INCOMPATIBILITIES
SENSITIVE TO HEAT
STRONG OXIDIZING AGENTS
STRONG ACIDS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE,
AND NITROGEN OXIDES.
CYANIDES
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. ---------------------------------------- TOXICOLOGICAL INFORMATION----------------------------------------
ACUTE EFFECTS
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
VOMITING.
DOSE-RELATED SIDE EFFECTS MAY INCLUDE: ANOREXIA, NAUSEA, VOMITING,
HEADACHE, DIZZINESS, TACHYCARDIA, NERVOUSNESS, INSOMNIA, SKIN DISORDERS
CAUSES SKIN IRRITATION.
READILY ABSORBED THROUGH SKIN.
HARMFUL IF ABSORBED THROUGH SKIN.
CAUSES SEVERE EYE IRRITATION.
HARMFUL IF INHALED.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
HARMFUL IF SWALLOWED.

LD
LC

CHRONIC EFFECTS
TARGET ORGAN(S):
LIVER, KIDNEYS
NERVES
BONE MARROW
THIS PRODUCT IS OR CONTAINS A COMPONENT THAT HAS BEEN REPORTED TO BE
POSSIBLY CARCINOGENIC BASED ON ITS IARC, ACGIH, NTP OR EPA
CLASSIFICATION.
RTECS #: UR8400000
PYRIDINE

IRRITATION DATA
SKN-RBT 500 MG/24H MLD

85JCAE - 839,1986

TOXICITY DATA
ORL-RAT LD50: 891 MG/KG
IHL-RAT LC50: 28500 MG/M3/1H
IPR-RAT LD50: 866 MG/KG
SCU-RAT LD50: 866 MG/KG
IVN-RAT LD50: 360 MG/KG
ORL-MUS LD50: 1500 MG/KG
IPR-MUS LD50: 950 MG/KG
SCU-MUS LD50: 1250 MG/KG
IVN-MUS LD50: 420 MG/KG
IVN-DOG LD50: 880 MG/KG
SKN-RBT LD50: 1121 MG/KG
SKN-GFG LD50: 0.1 GM/KG
ORL-MAM LD50: 1500 MG/KG
IHL-MAM LC50: 10 GM/M3

85JCAE - 839,1986

GTPZAB 32(10),25,1988
GTPZAB 32(10),25,1988

TARGET ORGAN DATA
PERIPHERAL NERVE AND SENSATION (FLACCID PARALYSIS WITHOUT ANESTHESIA)
SENSE ORGANS AND SPECIAL SENSES (PTOSIS)
BEHAVIORAL (GENERAL ANESTHETIC)
BEHAVIORAL (SLEEP)
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (TREMOR)
BEHAVIORAL (ATAXIA)
BEHAVIORAL (COMA)
CARDIAC (CHANGE IN RATE)
VASCULAR (BP LOWERING NOT CHARACTERIZED IN AUTONOMIC SECTION)
LUNGS, THORAX OR RESPIRATION (DYSPNAE)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY DEPRESSION)
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF SALIVARY GLANDS)
LIVER (OTHER CHANGES)
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 - - - - - - - -
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF
THIS MATERIAL.
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 ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - - - REGULATORY INFORMATION - - - - - - - -

EUROPEAN INFORMATION

EC INDEX NO: 613-002-00-7

HIGHLY FLAMMABLE

HARMFUL

R 11

HIGHLY FLAMMABLE.

R 20/21/22

HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

S 28

AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF SOAP SUDS.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-TWA 5 PPM

MSHA STANDARD-AIR:TWA 5 PPM (15 MG/M3)

DTLV* 3,220,1971

OSHA PEL (GEN INDU):SH TWA 5 PPM (15 MG/M3)

CFR 29.1910.1000,1994

OSHA PEL (CONSTRUC):SH TWA 5 PPM (15 MG/M3)

CFR 29.1926.55,1994

OSHA PEL (SHIYARD):SH TWA 5 PPM (15 MG/M3)

CFR 29.1915.1000,1993

OSHA PEL (FED CONT):SH TWA 5 PPM (15 MG/M3)

CFR 41.50-204.50,1994

OEL-ARAB REPUBLIC OF EGYPT: TWA 5 PPM (15 MG/M3), JAN 1993

OEL-AUSTRALIA: TWA 5 PPM (15 MG/M3), JAN 1993

OEL-AUSTRIA: MAK 5 PPM (15 MG/M3), JAN 1999

OEL-BELGIUM: TWA 5 PPM (15 MG/M3), JAN 1993

OEL-DENMARK: TWA 5 PPM (15 MG/M3), JAN 1999

OEL-FINLAND: TWA 5 PPM (15 MG/M3), STEL 10 PPM (30 MG/M3), SKIN, JAN 1999

OEL-FRANCE: VME 5 PPM (15 MG/M3), VLE 10 PPM, JAN 1999

OEL-GERMANY: MAK 5 PPM (15 MG/M3), JAN 1999

OEL-HUNGARY: TWA 5 MG/M3, STEL 10 MG/M3, SKIN, JAN 1993

OEL-THE NETHERLANDS: MAC-TGG 5 PPM (15 MG/M3), JAN 1999

OEL-NORWAY: TWA 5 PPM (15 MG/M3), JAN 1999

OEL-THE PHILIPPINES: TWA 5 MG/M3, JAN 1993

OEL-POLAND: MAC(TWA) 5 MG/M3, MAC(STEL) 30 MG/M3, JAN 1999

OEL-RUSSIA: STEL 5 MG/M3, JAN 1993

OEL-SWEDEN: NOV 5 PPM (16 MG/M3), KTV 10 PPM (35 MG/M3), JAN 1999

OEL-SWITZERLAND: MAK-W 5 PPM (15 MG/M3), KZG-W 10 PPM (30 MG/M3), JAN 1999

OEL-TURKEY: TWA 5 PPM (15 MG/M3), JAN 1993

OEL-UNITED KINGDOM: TWA 5 PPM (16 MG/M3), STEL 10 PPM (33 MG/M3), SEP 2000

OEL IN ARGENTINA, BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV;

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

NIOSH REL TO PYRIDINE-AIR:10H TWA 5 PPM

NIOSH* DHHS #92-100,1992

NOHS 1974: HDZ 65080; NTS 22; TNF 1103; NOS 18; TNE 29286

NOES 1983: HDZ 65080; NTS 32; TNF 1558; NOS 42; TNE 42908; TFE 10568

EPA GENETOX PROGRAM 1988, POSITIVE/DOSE RESPONSE: IN VITRO SCE-NONHUMAN

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA 8(A) PRELIMINARY ASSESSMENT INFORMATION, FINAL RULE

FEREAC 47,26992,82

EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES

ON EPA IRIS DATABASE

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 2001

NIOSH ANALYTICAL METHOD, 1994: PYRIDINE, 1613

NIOSH ANALYTICAL METHOD, 1996: PYRIDINE, 1613

NTF CARCINOGENESIS STUDIES (DRINKING WATER);CLEAR EVIDENCE:MOUSE

NTFTR* NTP-TR-470,2000

NTF CARCINOGENESIS STUDIES (DRINKING WATER); SOME EVIDENCE: RAT
NTPTR* NTP-TR-470, 2000

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.
THIS PRODUCT IS OR CONTAINS CHEMICAL(S) KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER.

SECTION 16. -- -- -- -- -- -- OTHER INFORMATION-- -- -- -- -- --

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