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M A T E R I A L S A F E T Y D A T A S H E E T

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: 20MM 25 C 10MM 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	BIOFX* 14-4/1970
IHL-RAT LC50:28500 MG/M3/1H	BIOFX* 14-4/1970
IPR-RAT LD50:866 MG/KG	NTIS** PB195-158
SCU-RAT LD50:866 MG/KG	CTOXAO 4,185,1971
IVN-RAT LD50:360 MG/KG	PLRCAT 5,341,1973
ORL-MUS LD50:1500 MG/KG	PLRCAT 5,341,1973
IPR-MUS LD50:950 MG/KG	PBPHAW 1,542,1965
SCU-MUS LD50:1250 MG/KG	PLRCAT 5,341,1973
IVN-MUS LD50:420 MG/KG	PLRCAT 5,341,1973
IVN-DOG LD50:880 MG/KG	TXCYAC 4,165,1975
SKN-RBT LD50:1121 MG/KG	BIOFX* 14-4/1970
SKN-GPG LD50:1 GM/KG	85JCAE -,839,1986
ORL-MAM LD50:1500 MG/KG	GTPZAB 32(10),25,1988
IHL-MAM LC50:10 GM/M3	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 (DYSPPNAE)
 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

DTLVS* TLV/BEI,1999

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

DTLVS* 3,220,1971

OSHA PEL (GEN INDU):8H TWA 5 PPM (15 MG/M3)

CFRGBR 29,1910.1000,1994

OSHA PEL (CONSTRUC):8H TWA 5 PPM (15 MG/M3)

CFRGBR 29,1926.55,1994

OSHA PEL (SHIPYARD):8H TWA 5 PPM (15 MG/M3)

CFRGBR 29,1915.1000,1993

OSHA PEL (FED CONT):8H TWA 5 PPM (15 MG/M3)

CFRGBR 41,50-204.50,1994

OEL-ARAB REPUBLIC OF EGYPT: TWA 5 PPM (15 MG/M3), JAN1993

OEL-AUSTRALIA: TWA 5 PPM (15 MG/M3), JAN1993

OEL-AUSTRIA: MAK 5 PPM (15 MG/M3), JAN1999

OEL-BELGIUM: TWA 5 PPM (16 MG/M3), JAN1993

OEL-DENMARK: TWA 5 PPM (15 MG/M3), JAN1999

OEL-FINLAND: TWA 5 PPM (15 MG/M3), STEL 10 PPM (30 MG/M3), SKIN,
JAN1999

OEL-FRANCE: VME 5 PPM (15 MG/M3), VLE 10 PPM, JAN1999

OEL-GERMANY: MAK 5 PPM (15 MG/M3), JAN1999

OEL-HUNGARY: TWA 5 MG/M3, STEL 10 MG/M3, SKIN, JAN1993

OEL-THE NETHERLANDS: MAC-TGG 5 PPM (15 MG/M3), JAN1999

OEL-NORWAY: TWA 5 PPM (15 MG/M3), JAN1999

OEL-THE PHILIPPINES: TWA 5 MG/M3, JAN1993

OEL-POLAND: MAC(TWA) 5 MG/M3, MAC(STEL) 30 MG/ME, JAN1999

OEL-RUSSIA: STEL 5 MG/M3, JAN1993

OEL-SWEDEN: NGV 5 PPM (16 MG/M3), KTV 10 PPM (35 MG/M3), JAN1999

OEL-SWITZERLAND: MAK-W 5 PPM (15 MG/M3), KZG-W 10 PPM (30 MG/M3),
JAN1999

OEL-TURKEY: TWA 5 PPM (15 MG/M3), JAN1993

OEL-UNITED KINGDOM: TWA 5 PPM (16 MG/M3), STEL 10 PPM (33 MG/M3),
SEP2000

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: HZD 65080; NIS 22; TNF 1103; NOS 18; TNE 29286

NOES 1983: HZD 65080; NIS 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

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

NTPTR* NTP-TR-470,2000

NTP 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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