MATERIAL SAFETY DATA SHEET

SECTION 1. - - - - - - - - - - CHEMICAL IDENTIFICATION- - - - - - - - -
CATALOG #: 154601
NAME: ACETONITRILE, 99.5+%, SPECTROPHOTOMETRIC GRADE

SECTION 2. - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -
CAS #: 75-05-8
MF: C2H3N
EC NO: 200-835-2
SYNONYMS
ACETONITRIL (GERMAN, DUTCH) * ACETONITRILE (ACGIH:OSHA) *
CYANOMETHANE * CYANURE DE METHYL (FRENCH) * ETHANENITRILE * ETHYL
NITRILE * METHANECARBONITRILE * METHANECYANO * METHYLKYANID (CZECH)
* NCI-C60822 * RCRA WASTE NUMBER U003 * USAF RK-488 *

SECTION 3. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - -
LABEL PRECAUTIONARY STATEMENTS
FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
TOXIC
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
RISK OF SERIOUS DAMAGE TO EYES.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER
CAUSES SEVERE EYE IRRITATION.
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, GLOVES AND EYE/FACE
PROTECTION.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

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.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
FLAMMABLE LIQUID.
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.

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 CONTAMINATED CLOTHING BEFORE REUSE.
WASH THOROUGHLY AFTER HANDLING.
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.
HANDLE AND STORE UNDER NITROGEN.

SECTION 9. - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - 
PHYSICAL PROPERTIES
BOILING POINT: 81 C TO 82 C
MELTING POINT: -48 C
FLASHPOINT 42 F
EXPLOSION LIMITS IN AIR:
UPPER 16%
LOWER 4.4%
AUTOIGNITION TEMPERATURE: 973 F
VAPOR PRESSURE: 72.8MM 20 C
SPECIFIC GRAVITY: 0.786
VAPOR DENSITY: 1.41

SECTION 10. - - - - - - STABILITY AND REACTIVITY - - - - - - - - - 
STABILITY
STABLE.
INCOMPATIBILITIES
ACIDS
BASES
OXIDIZING AGENTS
REDUCING AGENTS
ALKALI METALS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
CARBON MONOXIDE, CARBON DIOXIDE
NITROGEN OXIDES
HYDROGEN CYANIDE
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - - -
ACUTE EFFECTS
MAY CAUSE SKIN IRRITATION.
TOXIC IF ABSORBED THROUGH SKIN.
CAUSES SEVERE EYE IRRITATION.
TOXIC IF INHALED.
MATERIAL MAY BE IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
TOXIC IF SWALLOWED.
ACETONITRILE IS METABOLIZED IN THE LIVER TO WATER, FORMIC ACID AND
HYDROGEN CYANIDE. THE CYANIDE IS FURTHER METABOLIZED TO THIOCYANATE.
THE ONSET OF SYMPTOMS IS GENERALLY DELAYED PENDING CONVERSION TO
CYANIDE.
ADVERSE EFFECTS MAY INCLUDE NAUSEA, VOMITING, DIARRHEA, HEADACHE.
DIZZINESS, RASHES AND CYANOSIS.
OTHER SYMPTOMS INCLUDE MENTAL EXCITEMENT OR DEPRESSION, DROWSINESS,
IMPAIRED PERCEPTION, INCOORDINATION, STUPOR, COMA AND DEATH.

CHRONIC EFFECTS
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER, KIDNEYS
BLOOD, LUNGS
THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS
TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP OR EPA
CLASSIFICATION.
RTECS #: AL7700000
ACETONITRILE
IRRITATION DATA
SKN-RBT 500 MG OPEN MLD
EYE-RBT 100 UL/24H MOD
TOXICITY DATA
ORL-RAT LD50:2460 MG/KG
IHL-RAT LC50:7551 PPM/8H
IPR-RAT LD50:850 MG/KG
SCU-RAT LD50:3500 MG/KG
IVN-RAT LD50:1680 MG/KG
PAR-RAT LD50:1100 MG/KG
ORL-MUS LD50:269 MG/KG
IHL-MUS LC50:2693 PPM/1H
IPR-MUS LD50:175 MG/KG
SCU-MUS LD50:4480 MG/KG
IVN-MUS LD50:612 MG/KG
ORL-CAT LD50:200 MG/KG
IHL-CAT LC50:18 GM/M3
ORL-RBT LD50:50 MG/KG
IHL-RBT LC50:2828 PPM/4H
SKN-RBT LD50:2 GM/KG
ORL-GPG LD50:177 MG/KG
IHL-GPG LC50:5655 PPM/4H
ORL-MAM LD50:1670 MG/KG
UCDS** 3/18/1965
IJTOFN 19,363,2000

TARGET ORGAN DATA
SENSE ORGANS AND SPECIAL SENSES (CORNEAL DAMAGE)
BEHAVIORAL (HALLUCINATIONS, DISTORTED PERCEPTIONS)
BEHAVIORAL (CONVulsIONS OR EFFECT ON SEIZURE THRESHOLD)
BEHAVIORAL (EXCITEMENT)
BEHAVIORAL (ATAXIA)
BEHAVIORAL (COMA)
CARDIAC (PULSE RATE INCREASED WITHOUT FALL IN BP)
LUNGS, THORAX OR RESPIRATION (DYSPIA)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY DEPRESSION)
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
GASTROINTESTINAL (NAUSEA OR VOMITING)
LIVER (TUMORS)
MATERNAL EFFECTS (OTHER EFFECTS ON FEMALE)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON EMBRYO OR FETUS (FETAL DEATH)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)
NUTRITIONAL AND GROSS METABOLIC (CHANGES IN: METABOLIC ACIDOSIS)
TUMORIGENIC (EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA)
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: 608-001-00-3
HIGHLY FLAMMABLE
TOXIC
R 11
HIGHLY FLAMMABLE.
R 20/21/22
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R 36
IRRITATING TO EYES.
S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 36/37
WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
ACGIH TLV-NOT CLASSIFIABLE AS A HUMAN CARCINOGEN DTLV* TLV/BEI,1999
ACGIH TLV-STEL 60 PPM DTLV* TLV/BEI,1999
ACGIH TLV-TWA 40 PPM DTLV* TLV/BEI,1999

MSHA STANDARD-AIR: TWA 40 PPM (70 MG/M3)
DTLV* 3,3,1971

OSHA PEL (GEN INDU): 8H TWA 40 PPM (70 MG/M3)
CFRBR 29,1910.1000,1994

OSHA PEL (CONSTRUC): 8H TWA 40 PPM (70 MG/M3)
CFRBR 29,1926.55,1994

OSHA PEL (SHIPYARD): 8H TWA 40 PPM (70 MG/M3)
CFRBR 29,1915.1000,1993

OSHA PEL (FED CONT): 8H TWA 40 PPM (70 MG/M3)
CFRBR 41,50-204.50,1994

OEL-ARAB REPUBLIC OF EGYPT: TWA 40 PPM (70 MG/M3), SKIN, JAN1993

OEL-AUSTRALIA: TWA 40 PPM (70 MG/M3), STEL 60 PPM, SKIN, JAN1993

OEL-AUSTRIA: MAK 40 PPM (70 MG/M3), JAN1999

OEL-BELGIUM: TWA 40 PPM (67 MG/M3), STEL 60 PPM (101 MG/M3), SKIN, JAN1993

OEL-DENMARK: TWA 40 PPM (70 MG/M3), JAN1999

OEL-FINLAND: TWA 40 PPM (70 MG/M3), STEL 60 PPM (105 MG/M3), JAN1993

OEL-FRANCE: VME 40 PPM (70 MG/M3), SKIN, JAN1999

OEL-GERMANY: MAK 40 PPM (70 MG/M3), JAN1999

OEL-HUNGARY: TWA 50 MG/M3, STEL 100 MG/M3, SKIN, JAN1993

OEL-THE NETHERLANDS: MAC-TGG 40 PPM (70 MG/M3), JAN1999

OEL-NORWAY: TWA 30 PPM (50 MG/M3), JAN1999

OEL-THE PHILIPPINES: TWA 40 PPM (70 MG/M3), JAN1993

OEL-Poland: TWA 70 MG/M3, STEL 140 MG/M3, JAN1999

OEL-RUSSIA: STEL 10 MG/M3, JAN1993

OEL-SWEDEN: TWA 30 PPM (50 MG/M3), STEL 50 PPM (100 MG/M3), JAN1999

OEL-SWITZERLAND: MAK-W 500 PPM (1200 MG/M3), STEL 1000 PPM (2400 MG/M3), JAN1999

OEL-TURKEY: TWA 40 PPM (70 MG/M3), JAN1999

OEL-UNITED KINGDOM: TWA 40 PPM (68 MG/M3), STEL 60 PPM (102 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 ACETONITRILE-AIR:10H TWA 20 PPM
NIOSH* DHHS #92-100,1992

NOHS 1974: HZD 02900; NIS 9; TNF 302; NOS 25; TNE 38201

NOES 1983: HZD 02900; NIS 19; TNF 1172; NOS 27; TNE 31341; TFE 7975

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: ACETONITRILE, 1606

NTP CARCINOGENESIS STUDIES (INHALATION);EQUIVOCAL EVIDENCE;RAT
NTPTR* NTP-TR-447,1996
NTP CARCINOGENESIS STUDIES (INHALATION); NO EVIDENCE: MOUSE
NTPTR* NTP-TR-447,1996
U.S. INFORMATION
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.
SECTION 16. - - - - - - - - OTHER INFORMATION - - - - - - - -
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