



chemists helping chemists in research & industry

aldrich chemical co.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

ATTN: SAFETY DIRECTOR
UNIVERSITY OF WISCONSIN WHITEWATER
P O BOX 296
WHITEWATER WI 53190

DATE: 06/06/89
CUST # 523216 P.O. # 0 C 1700

M A T E R I A L S A F E T Y D A T A S H E E T P A G E : 1

IDENTIFICATION

PRODUCT # N1095-0 NAME: NITROBENZENE, 99%
CAS # 98-95-3
MF: C6H5NO2

SYNONYMS

ESSENCE OF MIRBANE * ESSENCE OF MYRBANE * MIRBANE OIL * NCI-C60082 *
NITROBENZEEN (DUTCH) * NITROBENZEN (POLISH) * NITROBENZENE *
NITROBENZENE (ACGIH, OSHA) * NITROBENZENE, LIQUID (DOT) * NITROBENZOL *
NITROBENZOL (DOT) * NITROBENZOL, LIQUID (DOT) * OIL OF MIRBANE * OIL
OF MIRBANE (DOT) * OIL OF MYRBANE * RCRA WASTE NUMBER U169 * UN 1662
(DOT) *

TOXICITY HAZARDS

RTECS # DA6475000

BENZENE, NITRO-

IRRITATION DATA

SKN-RBT 500 MG/24H MLD
EYE-RBT 500 MG/24H MLD

85JCAE -,411,86
85JCAE -,411,86

TOXICITY DATA

UNR-MAN LDLO:35 MG/KG
SKN-RAT LD50:2100 MG/KG
IPR-RAT LD50:640 MG/KG
ORL-MUS LD50:590 MG/KG

85DCAI 2,73,70
GISAAA 24(9),15,59
AGGHAR 17,217,59
GTPZAB 25(8),50,81

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-TWA 1 PPM (SKIN) 85INA8 5,431,86
MSHA STANDARD-AIR:TWA 1 PPM (5 MG/M3) (SKIN) DTLVS* 3,183,71
OSHAPEL:8H TWA 1 PPM (5 MG/M3)(SKIN) FEREAC 54,2923,89
OSHAPEL FINAL:8H TWA 1 PPM (5 MG/M3)(SKIN) FEREAC 54,2923,89
EPA TSCA CHEMICAL INVENTORY, 1986
EPA TSCA 8(A) PRELIMINARY ASSESSMENT INFORMATION, FINAL RULE FEREAC
47,26992,82
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1989
NIOSH ANALYTICAL METHODS: SEE NITROBENZENES, 2005
MEETS CRITERIA FOR PROPOSED OSHA MEDICAL RECORDS RULE FEREAC 47,30420,
82

TARGET ORGAN DATA

BEHAVIORAL (GENERAL ANESTHETIC)
VASCULAR (OTHER CHANGES)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY STIMULATION)
PATERNAL EFFECTS (SPERMATOGENESIS)
PATERNAL EFFECTS (TESTES, EPIDIDYMISS, SPERM DUCT)
PATERNAL EFFECTS (PROSTATE, SEMINAL VESICLE, COMPER'S, ACCESSORY
GLANDS

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)
DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

HEALTH HAZARD DATA

ACUTE EFFECTS

MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.

Belgium
Aldrich Chemie N.V./S.A.
Bd. Lambertmontaan 140, b. 6
B-1030 Brussels
Telephone: (02) 2428750
Telex: 62302 Aldchem B
FAX: (02) 242 82 16

France
Aldrich-Chimie S.a.r.l.
27, Fossé des Treize
F-67000 Strasbourg
Telephone: (88) 327010
Telex: 890076 Aldrich F
FAX: (88) 75 12 83

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: (03) 258-0155
FAX: (03) 258-0157

United Kingdom
Aldrich Chemical Co., Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: (07476) 2211
Telex: 417238 Aldrich G
FAX: (07476) 3779

West Germany
Aldrich-Chemie GmbH & Co. KG
D-7924 Steinheim
Telephone: (07329) 87-0
Telex: 714838 Aldri D
FAX: (07329) 87-39



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CATALOG # N1095-0

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CAUSES SKIN IRRITATION.
ABSORPTION INTO THE BODY LEADS TO THE FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATION CAUSES CYANOSIS. ONSET MAY BE DELAYED 2 TO 4 HOURS OR LONGER.
MAY CAUSE NERVOUS SYSTEM DISTURBANCES.
EXPOSURE TO AND/OR CONSUMPTION OF ALCOHOL MAY INCREASE TOXIC EFFECTS.

EXPOSURE CAN CAUSE:
NAUSEA, HEADACHE AND VOMITING

CHRONIC EFFECTS
DAMAGE TO THE LIVER

FIRST AID

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF EXPOSURE, OBTAIN MEDICAL ATTENTION IMMEDIATELY.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

-----PHYSICAL DATA -----

MELTING POINT: 5 C TO 6 C
BOILING POINT: 210 C TO 211 C
SPECIFIC GRAVITY: 1.204
VAPOR DENSITY: 4.2
VAPOR PRESSURE: .15 MM @ 20 C
50.0 MM @ 120 C
APPEARANCE: YELLOW LIQUID

----- FIRE AND EXPLOSION HAZARD DATA -----

AUTO IGNITION TEMP.: 899 F
LOWER EXPLOSION LEVEL: 1.8%
UPPER EXPLOSION LEVEL: 40%
FLASH POINT: 190 F
EXTINGUISHING MEDIA
WATER SPRAY.
CARBON DIOXIDE, DRY CHEMICAL POWDER, ALCOHOL OR POLYMER FOAM.
SPECIAL FIRE FIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
COMBUSTIBLE LIQUID.
UNUSUAL FIRE AND EXPLOSION HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
FORMS EXPLOSIVE MIXTURES IN AIR.

----- REACTIVITY DATA -----

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS
STRONG REDUCING AGENTS
STRONG BASES
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE
NITROGEN OXIDES



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FAX: (02) 242 82 16

France
Aldrich-Chimie S.a.r.l.
27, Fossé des Treize
F-67000 Strasbourg
Telephone: (88) 327010
Telex: 890076 Aldrich F
FAX: (88) 75 12 83

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: (03) 258-0155
FAX: (03) 258-0157

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----- SPILL OR LEAK PROCEDURES -----

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

WASTE DISPOSAL METHOD

THIS COMBUSTIBLE MATERIAL MAY BE BURNED IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

OBSERVE ALL FEDERAL, STATE & LOCAL LAWS.

--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ----

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
READILY ABSORBED THROUGH SKIN.
WASH THOROUGHLY AFTER HANDLING.
HIGHLY TOXIC.
IRRITANT.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

----- ADDITIONAL PRECAUTIONS AND COMMENTS -----

ADDITIONAL INFORMATION

NITROBENZENE FORMS EXPLOSIVE MIXTURES WITH ALUMINUM CHLORIDE, ANILINE AND GLYCERINE MIXTURES, NITRIC ACID, NITROGEN TETROXIDE, AND SILVER PERCHLORATE. A SOLUTION OF PHOSPHORUS PENTACHLORIDE IN NITROBENZENE IS STABLE AT 110 C BUT BEGINS TO DECOMPOSE WITH ACCELERATING VIOLENCE ABOVE 120 C WITH EVOLUTION OF NITROUS FUMES.

----- REGULATORY INFORMATION -----

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALDRICH SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.



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