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SECTION 1. - - - - - CHEMICAL IDENTIFICATION- - - - -

CATALOG #: 421057  
NAME: P-TOLUIDINE, SOLID

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 106-49-0  
MF: C7H9N  
EC NO: 203-403-1

SYNONYMS

1-AMINO-4-METHYLBENZENE \* 4-AMINO-1-METHYLBENZENE \* 4-AMINOTOLUEN  
(CZECH) \* P-AMINOTOLUENE \* 4-AMINOTOLUENE \* ANILINE, P-METHYL- \*  
BENZENAMINE, 4-METHYL- (9CI) \* BENZENAMINE, 4-METHYL- (9CI) \* C.I.  
37107 \* C.I. AZOIC COUPLING COMPONENT 107 \* P-METHYLANILINE \* 4-  
METHYLANILINE \* P-METHYLBENZENAMINE \* 4-METHYLBENZENAMINE \* NAPHTOL  
AS-KG \* NAPHTOL AS-KGLL \* RCRA WASTE NUMBER U353 \* P-TOLUIDIN (CZECH)  
\* 4-TOLUIDINE \* P-TOLUIDINE (ACGIH:DOT) \* P-TOLUIDYNA (POLISH) \*  
TOLYLAMINE \* P-TOLYLAMINE \* UN1708 (DOT) \*

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

FLAMMABLE (USA)  
HIGHLY FLAMMABLE (EU)  
TOXIC  
MAY CAUSE CANCER.  
MAY CAUSE HERITABLE GENETIC DAMAGE.  
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.  
CAUSES SEVERE IRRITATION.  
TARGET ORGAN(S):  
LIVER  
BLOOD  
READILY ABSORBED THROUGH SKIN.  
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.  
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE  
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).  
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.  
STORE UNDER NITROGEN.

SECTION 4. - - - - - FIRST-AID MEASURES- - - - -

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.  
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.  
CALL A PHYSICIAN IMMEDIATELY.  
WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA  
WATER SPRAY.

CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

FLAMMABLE SOLID.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

THIS MATERIAL, LIKE MOST MATERIALS IN POWDER FORM, IS CAPABLE OF CREATING A DUST EXPLOSION.

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -

EVACUATE AREA.

SHUT OFF ALL SOURCES OF IGNITION.

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.

SECTION 7. - - - - - HANDLING AND STORAGE- - - - -

REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

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.

FACESHIELD (8-INCH MINIMUM).

DO NOT BREATHE DUST.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

KEEP TIGHTLY CLOSED.

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

DATA NOT AVAILABLE

SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -

STABILITY

STABLE.

INCOMPATIBILITIES

ACIDS

ACID CHLORIDES

ACID ANHYDRIDES

CHLOROFORMATES

STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

TOXIC FUMES OF:

CARBON MONOXIDE, CARBON DIOXIDE

NITROGEN OXIDES

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR.

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -

ACUTE EFFECTS

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.

CAUSES SEVERE IRRITATION.

HIGH CONCENTRATIONS ARE EXTREMELY DESTRUCTIVE TO TISSUES OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,

WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND

VOMITING.

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.

CHRONIC EFFECTS

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT HAS BEEN REPORTED TO BE PROBABLY CARCINOGENIC BASED ON ITS IARC, OSHA, ACGIH, NTP OR EPA CLASSIFICATION.

MAY ALTER GENETIC MATERIAL.

TARGET ORGAN(S):

LIVER

BLOOD

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: XU3150000

P-TOLUIDINE

IRRITATION DATA

SKN-RBT 500 MG/24H SEV	BIOFX* 31-4/1973
SKN-RBT 500 MG/24H MLD	85JCAE -,460,1986
EYE-RBT 100 MG SEV	BIOFX* 31-4/1973
EYE-RBT 20 MG/24H MOD	85JCAE -,460,1986

TOXICITY DATA

ORL-RAT LD50:336 MG/KG	BCTKAG 17,51,1984
IHL-RAT LC50:>640 MG/M3/1H	BIOFX* 31-4/1973
ORL-MUS LD50:330 MG/KG	GTPZAB 25(8),50,1981
IPR-MUS LD50:50 MG/KG	NTIS** AD691-490
ORL-RBT LD50:270 MG/KG	VINIT* #4035-77
SKN-RBT LD50:890 MG/KG	BIOFX* 31-4/1973
ORL-QAL LD50:237 MG/KG	AECTCV 12,355,1983
ORL-BWD LD50:42 MG/KG	TXAPA9 21,315,1972

TARGET ORGAN DATA

PERIPHERAL NERVE AND SENSATION (SPASTIC PARALYSIS WITH/WITHOUT SENSORY CH  
BEHAVIORAL (SOMNOLENCE)  
BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)  
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 - - - - -  
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: 612-024-00-4

HIGHLY FLAMMABLE

TOXIC

R 23/24/25

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

R 33

DANGER OF CUMULATIVE EFFECTS.

R 50

VERY TOXIC TO AQUATIC ORGANISMS.

S 28

AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER.

S 36/37

WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

S 61

AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEETS.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-ANIMAL CARCINOGEN DTLVS\* TLV/BEI,1996

ACGIH TLV-TWA 8.8 MG/M3 (2 PPM) (SKIN) DTLVS\* TLV/BEI,1996

OEL-AUSTRALIA:TWA 2 PPM (9 MG/M3);SKIN;CARCINOGEN JAN 1993

OEL-BELGIUM:TWA 2 PPM (8.8 MG/M3);SKIN;CARCINOGEN JAN 1993

OEL-DENMARK:TWA 2 PPM (9 MG/M3);SKIN JAN 1993

OEL-THE NETHERLANDS:TWA 2 PPM (9 MG/M3);SKIN JAN 1993

OEL-RUSSIA:STEL 1 MG/M3;SKIN JAN 1993

OEL-SWITZERLAND:TWA 2 PPM (9 MG/M3);SKIN JAN 1993

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

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

NIOSH REL TO P-TOLUIDINE-AIR:CA LOWEST FEASIBLE CONC. (SK)

NIOSH\* DHHS #92-100,1992

NOHS 1974: HZD M0854; NIS 8; TNF 508; NOS 5; TNE 2267

NOES 1983: HZD M0854; NIS 4; TNF 206; NOS 2; TNE 428; TFE 87

EPA GENETOX PROGRAM 1988, NEGATIVE: E COLI POLA WITHOUT S9; E COLI POLA WITH S9

EPA GENETOX PROGRAM 1988, NEGATIVE: S CEREVISIAE-HOMOZYGOSIS

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

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

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, APRIL 1997

OSHA ANALYTICAL METHOD #ID-73

U.S. INFORMATION

0.3% O-TOLUIDINE 95-53-4

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

CALIFORNIA PROPOSITION 65:

THIS PRODUCT IS OR CONTAINS CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

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

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA 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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