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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 #: D3254
NAME: 9,10-DIMETHYL-1,2-BENZANTHRACENE

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

CAS #: 57-97-6
MF: C20H16
EC NO: 200-359-5

SYNONYMS

DIMETHYLBENZANTHRACENE * DIMETHYLBENZ(A)ANTHRACENE * 7,12-DIMETHYLBENZANTHRACENE * 7,12-DIMETHYLBENZ(A)ANTHRACENE * 9,10-DIMETHYLBENZANTHRACENE * 9,10-DIMETHYL-1,2-BENZANTHRACENE * 9,10-DIMETHYL-1,2-BENZANTHRAZEN (GERMAN) * 7,12-DIMETHYLBENZO(A)ANTHRACENE * 1,4-DIMETHYL-2,3-BENZPHENANTHRENE * DMBA * 7,12-DMBA * NCI-C03918 * RCRA WASTE NUMBER U094 *

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

LABEL PRECAUTIONARY STATEMENTS

TOXIC

MAY CAUSE CANCER.
MAY CAUSE HERITABLE GENETIC DAMAGE.
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
DO NOT BREATHE DUST.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
KEEP CONTAINER TIGHTLY CLOSED IN A COOL WELL-VENTILATED PLACE.

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 SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

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.

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

EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
WEAR DISPOSABLE COVERALLS AND DISCARD THEM AFTER USE.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
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- - - - -

WASH CONTAMINATED CLOTHING BEFORE REUSE.
WASH THOROUGHLY AFTER HANDLING.
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 DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
TOXIC.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

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

PHYSICAL PROPERTIES

MELTING POINT: 122 C
SWISS POISON CLASS: 1*

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

INCOMPATIBILITIES

STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CARBON MONOXIDE, CARBON DIOXIDE

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

ACUTE EFFECTS

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.

MAY CAUSE IRRITATION.

CHRONIC EFFECTS

CARCINOGEN.

RTECS #: CW3850000

BENZ(A)ANTHRACENE, 7,12-DIMETHYL-

IRRITATION DATA

SKN-MUS 64 UG MLD CALEDQ 4,333,1978

TOXICITY DATA

ORL-RAT LD50:327 MG/KG	GANNA2 68,237,1977
IVN-RAT LD50:54 MG/KG	SCIEAS 147,1153,1965
ORL-MUS LD50:340 MG/KG	SCIEAS 147,1153,1965
IPR-MUS LD50:54 MG/KG	PWPSA8 24,177,1981
IVN-MUS LD50:340 MG/KG	SCIEAS 147,1153,1965
ITR-MUS LD50:22500 UG/KG	PWPSA8 24,177,1981

TARGET ORGAN DATA

BRAIN AND COVERINGS (TUMORS)

PERIPHERAL NERVE AND SENSATION (STRUCTURAL CHANGE IN NERVE OR SHEATH)

VASCULAR (TUMORS)

LUNGS, THORAX OR RESPIRATION (TUMORS)

LUNGS, THORAX OR RESPIRATION (BRONCHOGENIC CARCINOMA)

ENDOCRINE (TUMORS)

BLOOD (LEUKEMIA)

MUSCULO-SKELETAL (TUMORS)

SKIN AND APPENDAGES (TUMORS)

PATERNAL EFFECTS (SPERMATOGENESIS)

PATERNAL EFFECTS (TESTES, EPIDIDYMIS, SPERM DUCT)

MATERNAL EFFECTS (OVARIES, FALLOPIAN TUBES)

MATERNAL EFFECTS (BREASTS, LACTATION)

MATERNAL EFFECTS (PARTURITION)

MATERNAL EFFECTS (OTHER EFFECTS ON FEMALE)

EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)

EFFECTS ON FERTILITY (ABORTION)

EFFECTS ON EMBRYO OR FETUS (FETAL DEATH)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (CENTRAL NERVOUS SYSTEM)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (EYE, EAR)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (CRANIOFACIAL)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (UROGENITAL SYSTEM)

TUMORIGENIC EFFECTS (OVARIAN TUMORS)

TUMORIGENIC EFFECTS (UTERINE TUMORS)

TUMORIGENIC EFFECTS (TRANSPLACENTAL TUMORIGENESIS)

TUMORIGENIC EFFECTS (OTHER REPRODUCTIVE SYSTEM TUMORS)
EFFECTS ON NEWBORN (LIVE BIRTH INDEX)
EFFECTS ON NEWBORN (VIABILITY INDEX)
EFFECTS ON NEWBORN (GROWTH STATISTICS)
EFFECTS ON NEWBORN (GERM CELL EFFECTS)
EFFECTS ON NEWBORN (BEHAVIORAL)
EFFECTS ON NEWBORN (OTHER POSTNATAL MEASURES OR EFFECTS)
EFFECTS ON NEWBORN (DELAYED EFFECTS)
NUTRITIONAL AND GROSS METABOLIC (OTHER CHANGES)
TUMORIGENIC (CARCINOGENIC BY RTECS CRITERIA)
TUMORIGENIC (NEOPLASTIC BY RTECS CRITERIA)
TUMORIGENIC (EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA)
TUMORIGENIC (TUMORS AT SITE OF APPLICATION)
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 - - - - -
DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -
CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

EUROPEAN INFORMATION

TOXIC

R 45

MAY CAUSE CANCER.

R 22

HARMFUL IF SWALLOWED.

S 53

AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

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).

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

NOES 1983: HZD X6636; NIS 1; TNF 75; NOS 2; TNE 448; TFE 149

EPA GENETOX PROGRAM 1988, POSITIVE: CARCINOGENICITY-MOUSE/RAT; CELL
TRANSFORM.-SA7/F344 RAT

EPA GENETOX PROGRAM 1988, POSITIVE: CELL TRANSFORM.-BALB/C-3T3;
SHE-CLONAL ASSAY

EPA GENETOX PROGRAM 1988, POSITIVE: CELL TRANSFORM.-MOUSE EMBRYO

EPA GENETOX PROGRAM 1988, POSITIVE: CELL TRANSFORM.-RLV F344 RAT EMBRYO

EPA GENETOX PROGRAM 1988, POSITIVE: CELL TRANSFORM.-SA7/SHE; IN VITRO
CYTOGENETICS-NONHUMAN

EPA GENETOX PROGRAM 1988, POSITIVE: IN VIVO CYTOGENETICS-NONHUMAN BONE
MARROW

EPA GENETOX PROGRAM 1988, POSITIVE: IN VITRO CYTOGENETICS-HUMAN
LYMPHOCYTE

EPA GENETOX PROGRAM 1988, POSITIVE: HOST-MEDIATED ASSAY; MAMMALIAN
MICRONUCLEUS

EPA GENETOX PROGRAM 1988, POSITIVE: N CRASSA-FORWARD MUTATION;
HISTIDINE REVERSION-AMES TEST

EPA GENETOX PROGRAM 1988, POSITIVE: IN VITRO SCE-NONHUMAN; SPERM
MORPHOLOGY-MOUSE

EPA GENETOX PROGRAM 1988, POSITIVE: IN VITRO UDS IN RAT LIVER; V79 CELL
CULTURE-GENE MUTATION

EPA GENETOX PROGRAM 1988, POSITIVE: S CEREVISIAE GENE CONVERSION

EPA GENETOX PROGRAM 1988, POSITIVE/DOSE RESPONSE: CELL

TRANSFORM.-C3H/10T1/2

EPA GENETOX PROGRAM 1988, POSITIVE/DOSE RESPONSE: CELL TRANSFORM.-MOUSE

PROSTATE

EPA GENETOX PROGRAM 1988, POSITIVE/DOSE RESPONSE: IN VIVO SCE-NONHUMAN
EPA GENETOX PROGRAM 1988, NEGATIVE: S CEREVISIAE-HOMOZYGOSIS
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: E COLI POLA WITHOUT S9; E COLI
POLA WITH S9
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: MOUSE SPECIFIC LOCUS; D
MELANOGASTER SEX-LINKED LETHAL
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: IN VITRO UDS-HUMAN FIBROBLAST
EPA GENETOX PROGRAM 1988, POSITIVE: CHO GENE MUTATION
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 2001

U.S. INFORMATION

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
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