



**SIGMA-ALDRICH**

MAR 12 1999

SIGMA CHEMICAL COMPANY  
POST OFFICE BOX 14508  
SAINT LOUIS, MISSOURI 63178, USA

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DATE 03/02/99  
CUST#: 0-495-04629  
PO#: CC/BRONSON

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

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

CATALOG #: E1510  
NAME: ETHIDIUM BROMIDE AQUEOUS SOLUTION 10 MG PER ML

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

CAS #: 1239-45-8  
EC NO: 214-984-6

SYNONYMS

2,7-DIAMINO-10-ETHYL-9-PHENYLPHENANTHRIDINIUM BROMIDE \* 3,8-DIAMINO-5-ETHYL-6-PHENYLPHENANTHRIDINIUM BROMIDE \* 2,7-DIAMINO-9-PHENYL-10-ETHYLPHENANTHRIDINIUM BROMIDE \* 2,7-DIAMINO-9-PHENYLPHENANTHRIDINE ETHOBROMIDE \* DROMILAC \* ETHIDIUM BROMIDE \* HOMIDIUM BROMIDE \* RD 1572 \*

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

LABEL PRECAUTIONARY STATEMENTS

TOXIC  
MAY CAUSE HERITABLE GENETIC DAMAGE.  
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.  
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.  
DO NOT BREATHE SPRAY.  
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

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

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. 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.  
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.  
WASH CONTAMINATED CLOTHING BEFORE REUSE.  
IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, CALL A PHYSICIAN.

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

EXTINGUISHING MEDIA  
NONCOMBUSTIBLE.

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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                      P A G E   2

CATALOG #: E1510  
NAME: ETHIDIUM BROMIDE AQUEOUS SOLUTION 10 MG  
PER ML

USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

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

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

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.

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.  
MECHANICAL EXHAUST REQUIRED.  
DO NOT BREATHE VAPOR.  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
WASH THOROUGHLY AFTER HANDLING.  
IRRITANT.  
MUTAGEN.  
KEEP TIGHTLY CLOSED.  
STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR  
LIQUID.

PHYSICAL PROPERTIES

SOLUBILITY:

WATER - SOLUBLE  
PYRIDINE: SOLUBLE

METHANOL: SPARINGLY SOLUBLE

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

STABILITY  
STABLE.

INCOMPATIBILITIES  
STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
TOXIC FUMES OF:

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CATALOG #: E1510  
NAME: ETHIDIUM BROMIDE AQUEOUS SOLUTION 10 MG PER ML

CARBON MONOXIDE, CARBON DIOXIDE  
NITROGEN OXIDES  
HYDROGEN BROMIDE GAS

HAZARDOUS POLYMERIZATION  
WILL NOT OCCUR.

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

ACUTE EFFECTS  
MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.  
CAUSES EYE AND SKIN IRRITATION.  
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER  
RESPIRATORY TRACT.

CHRONIC EFFECTS  
MAY ALTER GENETIC MATERIAL.  
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND  
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: SF7950000  
PHENANTHRIDINIUM, 3,8-DIAMINO-5-ETHYL-6-PHENYL-, BROMIDE

TOXICITY DATA  
SCU-MUS LD50:110 MG/KG ATMPA2 46,285,1952

TARGET ORGAN DATA  
TUMORIGENIC (ACTIVE AS ANTI-CANCER AGENT)  
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 46

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CATALOG #: E1510  
NAME: ETHIDIUM BROMIDE AQUEOUS SOLUTION 10 MG  
PER ML

MAY CAUSE HERITABLE GENETIC DAMAGE.

R 36/37/38  
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

S 45  
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE  
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

S 26  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.

S 23  
DO NOT BREATHE SPRAY.

S 36/37/39  
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE  
PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

NOHS 1974: HZD A1168; NIS 1; TNF 17; NOS 1; TNE 34

NOES 1983: HZD A1168; NIS 1; TNF 7; NOS 3; TNE 21

EPA GENETOX PROGRAM 1988, POSITIVE: IN VITRO MAMMALIAN NONHUMAN  
MICRONUCLEUS

EPA GENETOX PROGRAM 1988, POSITIVE: E COLI POLA WITHOUT S9; HISTIDINE  
REVERSION-AMES TEST

EPA GENETOX PROGRAM 1988, NEGATIVE: CELL TRANSFORM.-SA7/SHE; SPERM  
MORPHOLOGY-MOUSE

EPA GENETOX PROGRAM 1988, NEGATIVE: S CEREVISIAE GENE CONVERSION; S  
CEREVISIAE-HOMOZYGOSIS

EPA GENETOX PROGRAM 1988, NEGATIVE: S CEREVISIAE-REVERSION

EPA GENETOX PROGRAM 1988, INCONCLUSIVE: CYTOGENETICS-MALE GERM CELL

EPA GENETOX PROGRAM 1988, POSITIVE: CHO GENE MUTATION

NTP CARCINOGENESIS STUDIES; SELECTED, NOVEMBER 1998

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

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