



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

EMERGENCY PHONE 1-314-771-5765

ATTN: SAFETY DIRECTOR
UNIV OF WISC-WHITEWATER
PURCHASING OFFICE
800 W MAIN ST
WHITEWATER WI 53190-1705

DATE: 09/27/94
CUST#: 2-097-94816
PO#: UNE-51497

MATERIAL SAFETY DATA SHEET PAGE 1

SECTION 1. CHEMICAL IDENTIFICATION

PRODUCT #: A6756 NAME: ARSENIC ACID SODIUM

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 10048-95-0
MF: HIASINA204

SYNONYMS
DIBASIC SODIUM ARSENATE * DISODIUM ARSENATE, HEPTAHYDRATE * SODIUM
ACID ARSENATE, HEPTAHYDRATE * SODIUM ARSENATE, DIBASIC, HEPTAHYDRATE *
SODIUM ARSENA TE HEPTAHYDRATE * SODIUM ARSENIATE *

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS
HIGHLY TOXIC (USA DEFINITION)
VERY TOXIC (EUROPEAN DEFINITION)
VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
DANGER: CONTAINS INORGANIC ARSENIC. CANCER HAZARD. HARMFUL IF
INHALED OR SWALLOWED. USE ONLY WITH ADEQUATE VENTILATION OR
RESPIRATORY PROTECTION.
TARGET ORGAN(S):
SKIN
LUNGS

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.
DISCARD CONTAMINATED CLOTHING AND SHOES.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH
VERTRIEBS GmbH
Grünwalder Weg 30
82041 Deisenhofen
Deutschland

SIGMA-ALDRICH QUIMICA, S.A.
Apt. Correas 161
28100 Alcobendas
(Madrid)
España

SIGMA-ALDRICH S.r.l.
Via Gallarate 154

SIGMA-ALDRICH s.r.o.
Krizkova 27
186 00 Praha 8
Ceská Republika

SIGMA CHEMIE
K. Carlsplein, 8
B-2880 Bornem
Belgie/Belgique

SIGMA-ALDRICH CHEMICAL
REPRESENTAÇÕES LTDA.
Rua Sabard, 566 - Conj. 53

SIGMA CHEMIE
P.O. Box 260
CH-9470 Buchs
Switzerland

SIGMA CHEMICAL CO. LTD.
Fancy Road, Poole
Dorset BH17 7NH
England

SIGMA-ALDRICH QUIMICA, S.A. de C.V.
Avenida Picoacho Ajusco No. 130-303
Fraccionamiento Jardines en la Montaña
14210 Mexico, D.F.

SIGMA-ALDRICH KR
Teréz krt. 39
1067 Budapest
Hungary

SIGMA-ALDRICH CORPORATION
New Delhi Location
B-4/156, Seldarjung Enclave
New Delhi - 110 029
India

SIGMA-ALDRICH
206 Samhan Campus Building
17-3 Yoido-dong Yungdeungpo-ku
Seoul
South Korea



THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

MATERIAL SAFETY DATA SHEET

PAGE 2

PRODUCT #: A6756
MF: MIASINA204

NAME: ARSENIC ACID SODIUM

CUST#: 2-097-94816
PO#: UNE-51497

SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
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

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.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
HIGHLY TOXIC.
CARCINOGEN.
IRRITANT.
KEEP TIGHTLY CLOSED.
HYGROSCOPIC
STORE IN A COOL DRY PLACE.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
WHITE CRYSTALS

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH
VERTRIEBS GmbH
Grünwalder Weg 30
82041 Deisenhofen
Deutschland

SIGMA-ALDRICH QUIMICA, S.A.
Apt. Correas 161
28100 Alcobendas
(Madrid)
España

SIGMA-ALDRICH S.r.l.
Via Gallarate 154

SIGMA-ALDRICH s.r.o.
Krizkova 27
186 00 Praha 8
Ceska Republika

SIGMA-ALDRICH PTY., LIMITED
Unit 2, 10 Anella Ave.
Crows Nest NSW 1585

SIGMA CHEMIE
K. Cardijnplein, 8
B-2880 Bornem
Belgie/Belgique

SIGMA-ALDRICH CHEMICAL
REPRESENTAÇÕES LTDA.
Rua Sabará, 566 - Conj. 53
Belo Horizonte - Minas Gerais - Brasil

SIGMA CHEMIE
P.O. Box 260
CH-9470 Buchs
Switzerland

SIGMA CHEMICAL CO. LTD.
Fancy Road, Poole
Dorset BH17 7NH
England

SIGMA-ALDRICH QUIMICA, S.A. de C.V.
Avenida Picacho Ajusco No. 130-303
Fraccionamiento Jardines en la Montaña
14210 Mexico, D.F.

SIGMA-ALDRICH CORPORATION
New Delhi Location
B-4/15B, Saldarjung Enclave
New Delhi - 110 029
India

SIGMA-ALDRICH KR
Teréz krt. 39
1067 Budapest
Hungary

SIGMA-ALDRICH
206 Samhan Campus Building
17-3 Yoido-dong Yungdeungpo-ku
Seoul
South Korea



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

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

PRODUCT #: A6756
MF: HIAS1NA204

NAME: ARSENIC ACID SODIUM

CUST#: 2-097-94816
PO#: UNE-51497

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

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS
STRONG ACIDS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
ARSENIC OXIDES

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

ACUTE EFFECTS
MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
CAUSES EYE AND SKIN IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
CAUSES DERMATITIS.

CHRONIC EFFECTS
CARCINOGEN.
TARGET ORGAN(S):
SKIN
LUNGS

RTECS NO: CG0900000
ARSENIC ACID, DISODIUM SALT, HEPTAHYDRATE

TOXICITY DATA
IMS-MUS LD50: 87360 UG/KG

EXMDA4 (440), 312, 78

TARGET ORGAN DATA
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)
BEHAVIORAL (ATAXIA)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON FERTILITY (LITTER SIZE)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
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 (BODY WALL)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (UROGENITAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (OTHER DEVELOPMENTAL ABNORMALITIES)

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH
VERTRIEBS GmbH
Grünwalder Weg 30
82041 Deisenhofen
Deutschland

SIGMA-ALDRICH QUIMICA, S.A.
Apt. Correo 161
28100 Alcobendas
(Madrid)
España

SIGMA-ALDRICH s.r.l.
Krizikova 27
186 00 Praha 8
Ceská Republika

SIGMA CHEMIE
K. Cardijnplein, 8
B-2880 Bornem
Belgie/Belgique

SIGMA CHEMIE
P.O. Box 280
CH-9470 Buchs
Switzerland

SIGMA-ALDRICH QUIMICA, S.A. de C.V.
Avenida Picacho Ajusco No. 130-303
Fraccionamiento Jardines en la Montaña
14210 Mexico, D.F.

SIGMA-ALDRICH CORPORATION
New Delhi Location
B-4/158, Saldarjung Enclave
New Delhi - 110 029
India

SIGMA CHIMIE
L'ISLE D'Abau Cheenes

SIGMA-ALDRICH s.r.l.
Via Gallarate 154
Unit 2, 10 Anella Ave.
Ceske Lize MOW 9154

SIGMA-ALDRICH CHEMICAL
REPRESENTAÇÕES LTDA
Rua Sabará, 566 - Conj. 53
Belo Horizonte - MG - Brasil

SIGMA CHEMICAL CO. LTD.
Fancy Road, Poole
Dorset BH17 7NH
England

SIGMA-ALDRICH Kft
Teréz krt. 39
1067 Budapest
Hungary

SIGMA-ALDRICH
205 Samhan Campus Building
17-3 Yoido-dong Yungdeungpo-ku
Seoul
South Korea



THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH BIOCHEMICALS AND DIAGNOSTIC REAGENTS

POST OFFICE BOX 14508 SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757 TELEEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010 OUTSIDE USA/CANADA call COLLECT 314-771-5750

MATERIAL SAFETY DATA SHEET PAGE 4

PRODUCT #: A6756 MF: HIAS1NA204

NAME: ARSENIC ACID SODIUM

CUST#: 2-097-94816 PO#: UNE-51497

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 --- THE MATERIAL SHOULD BE DISSOLVED IN 1) WATER; 2) ACID SOLUTION OR 3) OXIDIZED TO A WATER-SOLUBLE STATE. PRECIPITATE THE MATERIAL AS THE SULFIDE, ADJUSTING THE PH OF THE SOLUTION TO 7 TO COMPLETE PRECIPITATION. FILTER THE INSOLUBLES AND DISPOSE OF THEM IN A HAZARDOUS-WASTE SITE. DESTROY ANY EXCESS SULFIDE WITH SODIUM HYPOCHLORITE. NEUTRALIZE THE SOLUTION BEFORE FLUSHING DOWN THE DRAIN. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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

SECTION 15. --- REGULATORY INFORMATION ---

REVIEWS, STANDARDS, AND REGULATIONS ACGIH TLV-TWA 0.2 MG(AS)/M3 MSHA STANDARD-AIR: TWA 0.5 MG(AS)/M3 DTLVS* 3,15,71 OSHA-CANCER HAZARD CFR GBR 29,1910,1018,87 DEL-ARAB REPUBLIC OF EGYPT: TWA 0.2 MG(AS)/M3 JAN93 DEL-AUSTRALIA: TWA 0.05 MG(AS)/M3; CARCINOGEN JAN93 DEL-BELGIUM: TWA 0.2 MG(AS)/M3 JAN93 DEL-CZECHOSL DVAKIA: TWA 0.2 MG(AS)/M3; STEL 0.6 MG(AS)/M3 JAN93 DEL-DENMARK: TWA 0.05 MG(AS)/M3 JAN93 DEL-FINLAND: CARCINOGEN JAN93 DEL-FRANCE: TWA 0.2 MG(AS)/M3 JAN93 DEL-HUNGARY: STEL 0.5 MG(AS)/M3; CARCINOGEN JAN93 DEL-INDIA: TWA 0.2 MG(AS)/M3 JAN93 DEL-THE PHILIPPINES: TWA 0.5 MG(AS)/M3 JAN93 DEL-POLAND: TWA 0.3 MG(AS)/M3 JAN93 051NA8 6,82,91

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH, SIGMA-ALDRICH QUIMICA, S.A., SIGMA-ALDRICH s.r.o., SIGMA CHEMIE K. Cardington, SIGMA CHEMIE P.O. Box 260, SIGMA-ALDRICH QUIMICA, S.A. de C.V., SIGMA-ALDRICH CORPORATION New Delhi Location, SIGMA-ALDRICH PTY., LIMITED, SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA., SIGMA CHEMICAL CO. LTD., SIGMA-ALDRICH KR, SIGMA-ALDRICH 206 Samhan Campus Building, SIGMA CHIME L'ISLE D'Abreu Chesnos, Via Gallarate 154, Unit 2, 10 Anella Ave., Castle Hill NSW 2154, Rua Sabará, 566 - Conj. 53, R. Manoel de Paula, SP, Fancy Road, Poole, Dorset BH17 7NH, England, 1067 Budapest, Hungary, 17-3 Yoido-dong Yungdeungpo-ku Seoul, South Korea



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

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

PAGE 5

CUST#: 2-097-94816
PO#: UNE-51497

PRODUCT #: A 6756
MF: H1AS INA2 04

NAME: ARSENIC ACID SODIUM

OEL-SWEDEN: TWA 0.03 MG(AS)/M3; CARCINOGEN JAN93
OEL-SWITZERLAND: TWA 0.1 MG(AS)/M3; CARCINOGEN JAN93
OEL-THAILAND: TWA 0.5 MG(AS)/M3 JAN93
OEL-TURKEY: TWA 0.5 MG(AS)/M3 JAN93
OEL-UNITED KINGDOM: TWA 0.2 MG(AS)/M3 JAN93
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO ARSENIC, INORGANIC-AIR: CA CL 0.002 MG(AS)/M3/15M
NIOSH* DHHS #92-100,92
NIOSH CURRENT INTELLIGENCE BULLETIN 14, 1976
NTP 7TH ANNUAL REPORT ON CARCINOGENS, 1992: KNOWN TO BE CARCINOGENIC
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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 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.

COPYRIGHT 1994 SIGMA CHEMICAL CO.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH Grünwalder Weg 30 82041 Daisenhofen Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) Espana	SIGMA-ALDRICH s.r.o. Krizkova 27 186 00 Praha 8 Ceska Republika	SIGMA CHEMIE K. Cardijnplein, 8 B-2880 Bornem Belgie/Belgique	SIGMA CHEMIE P.O.Box 260 CH-9470 Buchs Switzerland	SIGMA-ALDRICH QUIMICA, S.A. de C.V. Avenida Picacho Ajusco No. 130-503 Fraccionamiento Jardines en la Montaña 14210 Mexico, D.F.	SIGMA-ALDRICH CORPORATION New Delhi Location B-4/158, Saldarjung Enclave New Delhi - 110 029 India
SIGMA CHIMIE L'ISLE D'Abau Cheemes C.P. 721	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20141 Milano	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154	SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA. Rua Sabara, 566 - Conj. 33	SIGMA CHEMICAL CO. LTD. Fairoy Road, Poole Dorset BH17 7NH	SIGMA-ALDRICH Kft Teréz krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 206 Samhan Campus Building 17-3 Yoido-dong Yungdeungpo-ku Seoul