



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

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TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
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THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

EMERGENCY PHONE 1-314-771-5765

ATTN: SAFETY DIRECTOR
UNIVERSITY OF WISCONSIN
WHITEWATER
ACCOUNTS PAYABLE
PO BOX 296
WHITEWATER WI 53190-0296

DATE 06/04/96
CUST#: 2-097-94804
PO#: UNF-64248

MATERIAL SAFETY DATA SHEET PAGE 1

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 520-30

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 520-200
NAME: A-NAPHTHOL 99+%

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 90-15-3
MF: C10H8O
EC NO: 201-969-4

SYNONYMS

BASE URSOL ERN * C.I. 76605 * C.I. OXIDATION BASE 33 * DURAFUR
DEVELOPER D * FOURAMINE ERN * FOURRINE 99 * FOURRINE ERN * FURRO ER *
ALPHA-HYDROXYNAPHTHALENE * 1-HYDROXYNAPHTHALENE * NAKO TRB * 1-
NAPHTHALENOL * ALPHA-NAPHTHOL * TERTRAL ERN * URSOL ERN * ZOBA ERN *

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS

TOXIC
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
CAUSES SEVERE IRRITATION.
READILY ABSORBED THROUGH SKIN.
TARGET ORGAN(S):

EYES

KIDNEYS

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.

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.

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.

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

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH Grünwalder Weg 30 82041 Daisenhofen Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) España	SIGMA-ALDRICH s.r.o. Krizkova 27 156 00 Praha 8 Ceská 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. 130-303 Fraccionamiento Jardines en la Montaña 14210 Mexico, D.F.	SIGMA-ALDRICH CORPORATION New Delhi Location B-4/158, Sakdajung Enclave New Delhi - 110 029 India
SIGMA CHIMIE L'ISLE D'Abauv Cheneas B.P. 701 92007 St. Quentin Fallavier	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20151 Milano	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154 Australia	SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA Rua Sabará, 866 - Conj. 53 01239-010 São Paulo, SP	SIGMA CHEMICAL CO. LTD. Fancy Road, Poole Dorset BH17 7NH England	SIGMA-ALDRICH KR Teréz krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 205 Samhan Campus Building 17-3 Yoido-dong Yungdeungpo-gu Seoul South Korea



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MATERIAL SAFETY DATA SHEET PAGE 2

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 520-30

CATALOG #: 520-200
NAME: A-NAPHTHOL 99+%

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.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

EVACUATE AREA.
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.
READILY ABSORBED THROUGH SKIN.
WASH THOROUGHLY AFTER HANDLING.
SEVERE IRRITANT.
TOXIC.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
SOLID.

PHYSICAL PROPERTIES

BOILING POINT: 278 C TO 280 C
MELTING POINT: 95 C TO 96 C
EXPLOSION LIMITS IN AIR:
UPPER 5%
LOWER 0.8%

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

- SIGMA-ALDRICH VERTRIEBS GmbH, SIGMA-ALDRICH QUIMICA, S.A., SIGMA-ALDRICH s.r.l., SIGMA CHEMIE, SIGMA CHEMIE, SIGMA-ALDRICH QUIMICA, S.A. de C.V., SIGMA-ALDRICH CORPORATION 10345 New Delhi Location
- SIGMA CHIMIE, SIGMA-ALDRICH S.r.l., SIGMA-ALDRICH PTY., LIMITED, SIGMA-ALDRICH CHEMICAL, SIGMA CHEMICAL CO. LTD., SIGMA-ALDRICH KR, SIGMA-ALDRICH



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MATERIAL SAFETY DATA SHEET PAGE 3

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 520-30

CATALOG #: 520-200
NAME: A-NAPHTHOL 99+%
AUTOIGNITION TEMPERATURE: 1007 F 541C
VAPOR PRESSURE: 1MM 94 C
VAPOR DENSITY: 4.5 @ 120 C

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

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS
STRONG BASES
ACID CHLORIDES
ACID ANHYDRIDES
HALOGENS
AIR SENSITIVE
LIGHT SENSITIVE

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE

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.
TARGET ORGAN(S):
EYES
LIVER, KIDNEYS
BLOOD
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: OL2800000
1-NAPHTHOL

IRRITATION DATA
SKN-RBT 500 MG/24H SEV
SKN-RBT 550 MG OPEN MOD
EYE-RBT 1 MG SEV

BIOEX* 25-4/73
UCDS** 11/10/64
UCDS** 11/10/64

TOXICITY DATA
ORL-RAT LD50:1870 MG/KG
FYI-OTS-0885-0443
IHL-RAT LC50:>420 MG/M3/1H
IPR-RAT LD50:250 MG/KG
FYI-OTS-0885-0443
ORL-MUS LD50:275 MG/KG
ORL-CAT LD50:134 MG/KG

TSCAT*
BIOEX* 25-4/73
TSCAT*
GISAAA 30(9), 22, 65
GISAAA 30(9), 22, 65

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BRANCH OFFICES AT:

Table with 6 columns listing branch offices for SIGMA-ALDRICH in various countries including Germany, Spain, Italy, Czech Republic, Belgium, Switzerland, Mexico, India, and South Korea.



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MATERIAL SAFETY DATA SHEET PAGE 4

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 520-30

CATALOG #: 520-200
NAME: A-NAPHTHOL 99+%

ORL-RBT LD50:9 GM/KG
SKN-RBT LD50:880 MG/KG
ORL-GFG LD50:2 GM/KG
GISAAA 30(9),22,65
AIHAAP 23,95,62
GISAAA 30(9),22,65

TARGET ORGAN DATA
EFFECTS ON FERTILITY (LITTER SIZE)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
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
EC INDEX NO: 604-029-00-5
TOXIC
R 21/22
HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED.
R 37/38
IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
R 41
RISK OF SERIOUS DAMAGE TO EYES.
S 22
DO NOT BREATHE DUST.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
S 37/39
WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
OEL-RUSSIA:STEL 0.5 MG/M3 JAN93
NOHS 1974: HZD 81692; NIS 20; TNF 1281; NOS 28; TNE 12938
NOES 1983: HZD 81692; NIS 7; TNF 5497; NOS 24; TNE 57255; TFE 43248
EPA GENETOX PROGRAM 1988, NEGATIVE: N CRASSA-ANEUPLOIDY; HISTIDINE
REVERSION-AMES TEST

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MATERIAL SAFETY DATA SHEET PAGE 5

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 520-30

CATALOG #: 520-200
NAME: A-NAPHTHOL 99+%

EPA GENETOX PROGRAM 1988, INCONCLUSIVE: MAMMALIAN MICRONUCLEUS
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 1995

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

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- | | | | | | | |
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28100 Alcobendas
(Madrid)
España | SIGMA-ALDRICH s.r.o.
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186 00 Praha 8
Ceská Republika | SIGMA CHEMIE
K Cardinplein, 8
B-2880 Bornem
België/Belgique | SIGMA CHEMIE
P.O. Box 260
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 10348
New Delhi Location
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New Delhi - 110 029
India |
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L'ISLE D'Abreau Chesnes
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