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

PRODUCT #: M1003
NAME: MOLYBDIC ACID SODIUM DIHYDRATE

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

CAS #: 10102-40-6
MF: MoO3Na2O4
SYNONYMS
DISODIUM MOLYBDATE DIHYDRATE * SODIUM MOLYBDATE DIHYDRATE *

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

LABEL PRECAUTIONARY STATEMENTS
HARMFUL
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.

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

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH copious AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND copious AMOUNTS OF WATER.
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.

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

EXTINGUISHING MEDIA NONCOMBUSTIBLE.
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-- -- -- -- -- --

CONTINUED ON NEXT PAGE
PRODUCT #: M1003  NAME: MOLYBDIC ACID SODIUM DIHYDRATE

CUST#: 2-097-94816  PDF#: UND-41251

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 9.

SECTION 8.  ---------------  EXPOSURE CONTROLS/PERSONAL PROTECTION  ---------------
CHEMICAL SAFETY GOGGLES.
USE PROTECTIVE CLOTHING, GLOVES AND MASK.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
DO NOT BREATHE DUST.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
WASH THOROUGHLY AFTER HANDLING.
IRRITANT.
HARMFUL SLD.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9.  ---------------  PHYSICAL AND CHEMICAL PROPERTIES  ---------------
APPEARANCE AND ODOR
WHITE CRYSTALS.
SPECIFIC GRAVITY: 3.280

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

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS.
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

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

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:
SIGMA CHEMIE GmbH
Gronwaldweg 30
48054 Osnabrueck
Germany

SIGMA QUIMICA
Av. Portugal 181
28100 Alcobendas (Madrid)
Spain

SIGMA ALDRICH, s.r.o.
Krivána 37
180 00 Praha 8
Czech Republic

SIGMA CHEMIE
K. Cestujícim, 8
8-2890 Wizeny
Bratislava

SIGMA CHEMIE
P.O. Box 280
CH-6470 Buchs
Switzerland

SIGMA CHEMIE LTD.
Hillcrest House
Fancy Road, Fosli
Dover DR7 7TN
England

SIGMA CHIMIE
Lidex Cité des glitches
81110 Toulouse
France

SIGMA ALDRICH CHEMICAL
REPRESENTAÇÔES LTDA.
Rua António de Pina 256 - Conjunto 53
01239-010 São Paulo, SP
Brazil

SIGMA ALDRICH
Cidade Jardim Itaquera
Av. Washington Luis
São Paulo, SP
Brazil
MATERIAL SAFETY DATA SHEET

PRODUCT #: M1003
ME #: M01NA204

NAME: MOLYBDIC ACID SODIUM DIHYDRATE

CUSTOM#: 2-097-04816
POR#: UN3-41251

ACUTE EFFECTS
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
CAUSES EYE IRRITATION.
CAUSES SKIN IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS: NO DA008000
MOLYBDIC ACID, DISODIUM SALT, DIHYDRATE

TOXICITY DATA
IPR-RAT LD50 520 MG/KG
IPR-MJS LD50 527 MG/KG

TARGET ORGAN DATA
BEHAVIORAL (CNS/ENCEPHALONE)
BEHAVIORAL (COMA)
MATERNAL EFFECTS (MENSTRUAL CYCLE CHANGES OR DISORDERS)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
ONLY SELECTED RECORD 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
CAUTIOUSLY ACIDIFY A 5% SOLUTION OR A SUSPENSION OF THE MATERIAL TO PH 3 WITH SULFURIC ACID. GRADUALLY ADD A 50% EXCESS OF AQUEOUS SODIUM BISULFITE WITH STIRRING AT ROOM TEMPERATURE. AN INCREASE IN TEMPERATURE INDICATES THAT A REACTION IS TAKING PLACE. IF NO REACTION IS OBSERVED ON THE ADDITION OF ABOUT 10% OF THE SODIUM BISULFITE SOLUTION INITIATE IT BY CAUTIOUSLY ADDING MORE ACID, IE MANGANESE, CHROMIUM, OR MOLYBDENUM ARE PRESENT ADJUST THE PH OF THE SOLUTION TO 7 AND TREAT WITH SULFIDE TO PRECIPITATE FOR BURIAL AS HAZARDOUS WASTE. DESTROY EXCESS SULFIDE, NEUTRALIZE AND FLUSH THE SOLUTION DOWN THE DRAIN.

SECTION 14: TRANSPORT INFORMATION

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

CONTINUED ON NEXT PAGE
SECTION 15. REGULATORY INFORMATION

REGULATORY INFORMATION

ACGIH TLV-TWA 10 mg/(Mg)/M3
MSHA STANDARDS-AIR TWA 10 mg/(Mg)/M3
OSHA PEL: 8H TWA 15 mg/(Mg)/M3, TOTAL DUST
OSHA PEL: 8H TWA 5 mg/(Mg)/M3, RESPIRABLE FRACTION
OSHA PEL FINAL: 8H TWA 10 mg/(Mg)/M3, TOTAL DUST
OSHA PEL FINAL: 8H TWA 5 mg/(Mg)/M3, RESPIRABLE FRACTION
OSHA PEL FINAL: 8H TWA 5 mg/(Mg)/M3, RESPIRABLE FRACTION
DEL- AUSTRALIA: THA 10 mg/(Mg)/M3 JANUARY 1993
DEL- BELGIUM: THA 10 mg/(Mg)/M3 JANUARY 1993
DEL- DENMARK: THA 10 mg/(Mg)/M3 JANUARY 1993
DEL- FRANCE: THA 5 mg/(Mg)/M3 STEL 10 mg/(Mg)/M3 JANUARY 1993
DEL- GERMANY: THA 15 mg/(Mg)/M3 JANUARY 1993
DEL- THE NETHERLANDS: THA 10 mg/(Mg)/M3 JANUARY 1993
DEL- THE PHILIPPINES: THA 15 mg/(Mg)/M3 JANUARY 1993
DEL- SWEDEN: THA 10 mg/(Mg)/M3 JANUARY 1993 (TOTAL DUST)
DEL- SWEDEN: THA 5 mg/(Mg)/M3 JANUARY 1993 (RESPIRABLE DUST)
DEL- SWITZERLAND: THA 10 mg/(Mg)/M3 JANUARY 1993
DEL- TURKEY: THA 15 mg/(Mg)/M3 JANUARY 1993
DEL- UNITED KINGDOM: THA 10 mg/(Mg)/M3 STEL 20 mg/(Mg)/M3 JANUARY 1993
DEL- IN BULGARIA, GERMANY: JORDAN, KOREA, NEW ZEALAND, SINGAPORE, VIETNAM CHEK AC GHTHTLW
NOS 1983: H2D X1599; NTS 2: TNE 78; NOS 3: TNE 1490; TFE 1059

SECTION 16. OTHER INFORMATION

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.

CONTINUED ON NEXT PAGE
MATERIAL SAFETY DATA SHEET

PRODUCT#: M1003
NAME: MOLYBDIC ACID SODIUM DIHYDRATE

CUST#: 2-097-94816
PO#: UND-41251

COPYRIGHT 1993 SIGMA CHEMICAL CO.
LICENSE GRANTED TO MAKE UNLIMITED COPIES FOR INTERNAL USE ONLY

SIGMA CHEMIE GmbH
Fürstenwalder Weg 20
D-80804 Denizhüllen
Deutschland.

SIGMA CHIMICA
Via Pavesi 11
20090 Bande
Italy.

SIGMA-ALDRICH, a.r.o.
Kolodvorska 79
108 01 Bratislava
Slovakia.

SIGMA CHIMICA
Via della Scienza 1
00154 Rome
Italy.

SIGMA-ALDRICH, LTD.
1-9 Westport Road
P.O. Box 1209
PO Box 1209
Wallingford, Connecticut 06492 USA

SIGMA CHEMIE
Oskar Schiele Strasse 2
82032 Gröbenzell
Germany.

SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA.
Rua Saboá 514 - CEP 556 - São Paulo, SP
01351-910 São Paulo, SP

SIGMA CHEMIE
P.O. Box 260
CH-4047 Basel
Switzerland.

SIGMA-ALDRICH CHEMICAL LTD.
Rutland House
Addington Place
London SW19 5QA
England.

SIGMA CHIMIE
C.J. Rodger Avenue
Iver Heath, Buckinghamshire
England.

SIGMA CHEMIE
P.O. Box 3853
Frankfurt 60032
Germany.

BRANCH OFFICES AT: