

CLIMAX MOLYBDENUM MARKETING CORP/A SUBSIDIARY OF PHELPS DODGE -- ROASTED  
MOLYBDENITE CONCENTRATES -- 6810-00-816-1025

=====  
Product Identification  
=====

Product ID:ROASTED MOLYBDENITE CONCENTRATES

MSDS Date:11/08/1996

FSC:6810

NIIN:00-816-1025

Status Code:A

MSDS Number: CKYTQ

=== Responsible Party ===

Company Name:CLIMAX MOLYBDENUM MARKETING CORP/A SUBSIDIARY OF PHELPS  
DODGE

Address:1501 W. FOU  
NTAINHEAD PARKWAY

Box:22015

City:TEMPE

State:AZ

ZIP:85285-2015

Country:US

Info Phone Num:480-929-4400

Emergency Phone Num:(800)424-9300

Chemtrec Ind/Phone:(800)424-9300

CAGE:UO282

=== Contractor Identification ===

Company Name:CHEMICAL MANAGEMENT SYSTEMS LLC DBA CHEMICAL MANAGEMENT  
SYST

Address:11029 NATURAL BRIDGE

Box:City:BRIDGETON

State:MO

ZIP:63044

Country:US

Phone:314-731-7278

Contract Num:SP0450-01-M-D262

CAGE:1LFJ4

Company Name:CLIMAX MOLYBDENUM MARKETING CORP/CYPRUS CLIMAX METALS CO

Address:1501 W. FOUNTAINHEAD PARKWAY

Box:22015

City:TEMPE

State:AZ

ZIP:85285-2015

Country:US

Phone:480-929-4400

CAGE:UO282

=====  
Composition/Information on Ingredients  
=====

Ingred Name:ROASTED MOLYBDENITE CONCENTRATES; RTECS NUMBER: QA4725000.

CAS:86089-09-0

Minimum % Wt:92.

Maxumum % Wt:100.

=====  
Hazards Identification  
=====

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:SHORT TERM EXPOSURE: MAY CAU

SE

IRRITATION OF THE NOSE, THROAT, SKIN, AND EYES. ADDITIONAL EFFECTS MAY INCLUDE BLURRED VISION. LONG TERM EXPOSURE: MAY CAUSE LACK OF APPETITE, WEIGHT LOSS, DIARRHEA, COUGHING, LUNG DAMAGE AND INCOORDINATION.

=====  
===== First Aid Measures =====

First Aid:INHALATION-REMOVE FROM AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. GET MEDICAL AID, IF NEEDED. SKIN-REMOVE CONTAMINATED CLOTHING & SHOES

IMMEDIATELY. WASH AREA WITH SOAP OR MILD DETERGENT & LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (15-20 MINS). GET MEDICAL AID, IF NEEDED. EYE-WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE, OCCASSIONALLY LIFTING UPPER & LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (15-20 MINS). GET MEDICAL AID, IF NEEDED. INGESTION-GET MEDICAL AID IF NEEDED. IF VOMITING OCCURS, KEEP HEAD LOWER THAN HIPS TO PREVENT ASPIRATION.

=====  
===== Fire Fighting Measures =====

Flash Point:NONE PROVIDED

Lower Limits:NONE PROVIDE

Upper Limits:NONE PROVIDE

Extinguishing Media:DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM (1993 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.6). FOR LARGER FIRES, USE WATER SPRAY, FOG, OR REGULAR FOAM.

Fire Fighting Procedures:FULL FIREFIGHTING TURN-OUT GEAR (BUNKER GEAR).

ANY SUPPLIED AIR RESPIRATOR WITH FULL FACEPIECE & OPERATED IN A POSITIVE PRESSURE-DEMAND/PO

SITIVE PRESSURE MODE IN COMBINATION WITH

A SEPARATE ESCAPE SUPPLY. ANY SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE. NEGLIGIBLE FIRE HAZARD WHEN EXPOSED TO HEAT/FLAME.

Unusual Fire/Explosion Hazard:MOVE CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. APPLY COOL WATER TO SIDE OF CAN THAT IS EXPOSED TO FLAMES UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM END OF TANK. DO NOT USE WATER DIRECTLY ON MATERIAL. IF LARGE AMOUNTS OF COMBUSTIBLE MATERIALS AR

E INVOLVED, FLOOD WITH WATER SPRAY OR FOG.

===== Accidental Release Measures =====

Spill Release Procedures: STOP LEAK IF YOU CAN DO SO WITHOUT RISK. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. FOR SMALL DRY SPILLS, WITH CLEAN SHOVEL PLACE MATERIAL INTO CLEAN, DRY CONTAINER AND COVER. MOVE CONTAINERS FROM SPILL AREA. FOR LARGER SPILLS, DIKE SPILL AREA FOR LATER DISPOSAL. KEEP UNNECESSARY PEOPLE AWAY. ISOLATE AREA AND DENY ENTRY.

===== Handling and Storage =====

Handling and Storage Precautions: STORAGE: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING THIS SUBSTANCE.  
Other Precautions: EXPOSURE LIMITS: MOLYBDENUM, SOLUBLE COMPOUNDS (AS MO): 5 MG/M3 OSHA TWA; 5 MG/M3 ACGIH TWA; 5 MG/M3 DFG MAK TWA (TOTAL DUST); 50 MG/M3 DFG MAK 30 MINUTE PEAK, AVERAGE VALUE, 1 TIME SHIFT.

===== Exposure Controls/  
Personal Protection =====

Respiratory Protection: -ANY DUST, MIST & FUME RESPIRATOR. -ANY CHEMICAL CARTRIDGE RESPIRATOR WITH A DUST, MIST & FUME FILTER. -ANY POWDERED ARI-PURIFYING RESPIRATOR WITH A DUST, MIST & FUME FILTER. -ANY TYPE "C" SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND/POSITIVE PRESSURE MODE OR WITH A FULL FACEPIECE, HELMET OR HOOD OPERATED IN CONTINUOUS-FLOW MODE.

Ventilation: PROVIDE LOCAL EXHAUST OR PROCESS ENCLOSURE TO MEET PUBLISHED EXPOSURE LIMITS.

Protective Gloves: EMPLOYEE SHOULD WEAR APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT.

Eye Protection: EMPLOYEE SHOULD WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES.

Other Protective Equipment: THE EMPLOYER SHOULD PROVIDE AN EYE WASH FOUNTAIN WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE. EMPLOYEE SHOULD PROVIDE AN EYE WASH FOUNTAIN WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

Work Hygienic Practices: EMPLOYEES SHOULD WEAR APPROP

IATE PROTECTIVE

CLOTHING & EQUIPMENT TO PREVENT REPEATED OR PROLONGED SKIN CONTACT WITH THIS SUBSTANCE.

Supplemental Safety and Health

TRADE NAMES/SYNONYMS: MOLYBDENUM OXIDE; RESIDUAL TECHNICAL MOLYBDIC OXIDE; MOO3, MOLY TRIOXIDE, CARBON FREE BRIQUETTES, TECH OXIDE.

CHEMICAL FAMILY: INORGANIC ACID; METAL OXIDE. RESPIRATORS: -ANY SELF -CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

===== Physi  
cal/Chemical Properties =====

HCC:N1

Boiling Pt:=1150.C, 2102.F

B.P. Text:SUBLIMES

Melt/Freeze Pt:=795.C, #####F

Spec Gravity:4.692

Solubility in Water:0.22% @ 28 DEG C

Appearance and Odor:ODORLESS, COLORLESS TO WHITE OR SLIGHTLY YELLOW TO BLUEISH POWDER, GRANULES OR

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

OXIDES OF MOLYBDENUM, BROMINE PENTAFLUORIDE, CHLORINE TRIFLUORIDE, LITHIUM, MAGNESIUM, POTASSIUM, SODIUM.

Stability Condition to Avoid:MAY SURN BUT DOES NOT IGNITE READILY.

FLAMMABLE, POISONOUS GASES MAY ACCUMULATE IN TANKS AND HOPPER CARS. MAY IGNITE COMBUSTIBLES (WOOD, PAPER, OIL, ETC.)

Hazardous Decomposition Products:NON HAZARDOUS.

Conditions to Avoid Polymerization:HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

===== Toxicological Information =====

Toxicological Information:TOXICITY DATA: 6

MG/M3/4 YEARS INHALATION-MAN

TCLO:>3920 MG/M3 ESTIMATED INHALATION LC 50(4-HR)-RAT; >5000 MG/KG

ORAL-RAT LD50;>2000 MG/KG LD50 DERMAL-RAT; TUMORIGENIC DATA

(RTECS). CARCINOGEN STATUS: NONE. LOCAL EFFECTS:

IRRITANT-INHALATION, SKIN, EYE. ACUTE TOXICITY LEVEL: MODERATELY

TOXIC BY INHALATION, INGESTION; SLIGHTLY TOXIC BY DERMAL

ABSORPTION. TARGET EFFECTS: POISONING MAY AFFECT THE LIV ER &

KIDNEYS.HEALTH EFFECST: INHALATION: ITTITANT. ACUTE EXPOSURE: MAY

CAUSE IRRITA

TION TO THE MUCOUS MEMBRANES OF THE THROAT & RESPIRATORY SYSTEM.

=====  
Ecological Information  
=====

Ecological: ACUTE AQUATIC TOXICITY: TEST ON RAINBOW TROUT, CONDUCTED IN COMPLIANCE WITH UK, US, JAPANESE AND OECD GLP STANDARDS, ESTABLISHED A "NO OBSERVED EFFECT LEVEL" OF 32 MG/L. TOXICITY TO DAPHNIDS: TESTS ON DAPHNIA MAGNA, CONDUCTED IN COMPLIANCE WITH UK, US, JAPANESE & OECD GLP STANDARDS, ESTABLISHED A "NO EFFECT" LEVEL AT 24 HRS OF 56

MG/L & A "NO EFFECT" LEVEL AT 48 HRS OF 18 MG/L.

ALGAE GROWTH INHIBITION: TEST ON SCENEDESMUS SUBSPICATUS, CONDUCTED IN COMPLIANCE WITH UK, US, JAPANESE & OECD GLP STANDARDS, ESTABLISHED A "NO OBSERVED EFFECT LEVEL" GREATER THAN OR EQUAL TO 100 MG/L.

=====  
Disposal Considerations  
=====

Waste Disposal Methods: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN DISPOSING THIS SUBSTANCE.

=====  
MSDS Transport Information  
=====

Transport Information: NO CLASSIFICATION CURRENTLY ASSIGNED.

=====  
Regulatory Information  
=====

SARA Title III Information: SARA SECTION 302 (40 CFR 355.30): N. SARA SECTION 304 (40 CFR 355.40): N. SARA SECTION 313 (40 CFR 372.65): Y. SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40 CFR 370.21): ACUTE HAZARD-Y; CHRONIC HAZARD-N; FIRE HAZARD-N; REACTIVITY HAZARD-N; SUDDEN RELEASE HAZARD-N.

Federal Regulatory Information: TSCA I

INVENTORY STATUS: Y. TSCA 12(B)

EXPORT NOTIFICATION: NOT LISTED. CERCLA SECTION 103 (40 CFR 302.4):

N. OSHA PROCESS SAFETY (29 CFR 1910.119): N.

State Regulatory Information: CALIFORNIA PROPOSITION 65: N.

=====  
Other Information  
=====

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly

y or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.