

SECTION 1**CHEMICAL PRODUCTS & COMPANY IDENTIFICATION****LANGELOTH METALLURGICAL COMPANY LLC**

AN AFFILIATE OF THOMPSON CREEK METALS COMPANY

10 LANGELOTH PLANT DRIVE**P.O. BOX 608****LANGELOTH, PA 15054**

FOR EMERGENCY INFORMATION

PRODUCTION: (724)-947-2201

SALES: (303)-761-8801

FAX: (303)-761-7420

CHEMTREC:

Domestic: (800)-424-9300

International: (202)-483-7616

SUBSTANCE: MOLYBDENUM DISULFIDE**TRADE NAMES/SYNONYMS:** MOLY DISULFIDE CONCENTRATE**CHEMICAL FAMILY:** MIXTURE**SECTION 2****COMPOSITION/INFORMATION ON INGREDIENTS****COMPONENT:** Molybdenum Disulfide**CAS NUMBER:** 1317-33-5**PERCENTAGE:** 94-98**SECTION 3****HAZARDS IDENTIFICATION****NFPA RATINGS (SCALE 0-4):** HEALTH = 1 FIRE = 0 REACTIVITY = 0**EMERGENCY OVERVIEW:** Although this material contains quartz, the respirable fraction is less than 0.1 %. Do not breath dust. Do not get in eyes. Keep container closed. Wash after handling. Use with adequate ventilation.**POTENTIAL HEALTH EFFECTS:****SHORT TERM EXPOSURE:** May cause irritation to eyes and skin.**LONG TERM EFFECTS:** No data available.**CARCINOGEN STATUS:**

OSHA: N

NTP: N

IARC: N

SECTION 4**FIRST AID MEASURES****INHALATION:** FIRST AID - Remove from exposure area to fresh air. If breathing has stopped, perform artificial respiration. Get medical attention.**SKIN CONTACT:** FIRST AID - Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent and large amounts of water until no evidence of material remains (approximately 15-20 minutes). Get medical attention.**EYE CONTACT:** FIRST AID - Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of material remains (approximately 15-20 minutes). Get medical attention.**INGESTION:** FIRST AID - Get medical attention if needed. If vomiting occurs, keep head lower than hips to prevent aspiration.

SECTION 5**FIRE FIGHTING MEASURES**

FIRE AND EXPLOSION HAZARD: Negligible fire hazard when exposed to heat or flame.

EXTINGUISHING MEDIA: Extinguish using agent suitable for type of surrounding fire.

FIREFIGHTING: No acute hazard. Move container from fire area if possible. Avoid breathing vapors or dusts; keep upwind.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition may release toxic and/or hazardous gases of molybdenum and sulfur.

SECTION 6**ACCIDENTAL RELEASE MEASURES**

OCCUPATIONAL SPILL: For large spills, sweep up with a minimum of dusting and place into suitable clean, dry containers for reclamation or later disposal.

SECTION 7**HANDLING AND STORAGE**

STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance. Store away from incompatible substances.

SECTION 8**EXPOSURE CONTROLS/PERSONAL PROTECTION**

EXPOSURE LIMITS:**MOLYBDENUM, INSOLUBLE COMPOUNDS (AS Mo):**

10 mg/m³ OSHA TWA (Total dust)

10 mg/m³ ACGIH TWA

15 mg/m³ DFG MAK TWA (Total dust)

150 mg/m³ DFG MAK 30 minute peak, average value, 1 time/shift

NOTE: The percentage of respirable quartz in this material is below 0.1 percent. If the material is reduced in size during handling or processing employee overexposures to quartz may occur.

VENTILATION: Provide local exhaust ventilation and/or general dilution ventilation to meet published exposure limits.

EYE PROTECTION: Employee should wear splash-proof or dust-resistant safety goggles to prevent eye contact with this substance.

EMERGENCY EYE WASH: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain within the immediate work area for emergency use.

CLOTHING: Employee should wear appropriate protective clothing and equipment to prevent repeated or prolonged skin contact with this substance.

GLOVES: Employee should wear appropriate protective gloves to prevent contact with this substance.

RESPIRATOR: The following respirators are recommended based on information found in the physical data, toxicity and health effects sections. They are ranked in order from minimum to maximum respiratory protection. The specific respirator selected must be based on contamination levels found in the work place, must be based on the specific operation, must not exceed the working limits of the respirator, and must be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

-Any dust, mist, and fume respirator.

- Any chemical cartridge respirator with a dust, mist, and fume filter.
- Any powered air-purifying respirator with a dust, mist, and fume filter.
- Any type 'C' supplied-air respirator with a full facepiece operated in pressure-demand or other positive-pressure mode or with a full facepiece, helmet or hood operated in continuous-flow mode.
- Any self-contained breathing apparatus with a fullface piece operated in pressure-demand or other positive-pressure mode.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Odorless, blue-gray to black crystalline powder.
DECOMPOSITION: Oxidizes above 315 C
BULK DENSITY: 130 lbs./cu. ft.
WATER SOLUBILITY: Insoluble

SECTION 10

STABILITY AND REACTIVITY

REACTIVITY: Stable under normal temperatures and pressures.

CONDITIONS TO AVOID: No reports found.

INCOMPATIBILITIES:

MOLYBDENUM DISULFIDE:

HYDROGEN PEROXIDE: Vigorous or violent reaction.

OXIDIZERS (STRONG): Fire and explosion hazard.

POTASSIUM NITRATE: Forms explosive mixture.

HAZARDOUS DECOMPOSITION: Thermal decomposition may release toxic and/or hazardous gases.

POLYMERIZATION: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

SECTION 11

TOXICOLOGY INFORMATION

MOLYBDENUM DISULFIDE:

CARCINOGEN STATUS: None

ACUTE TOXICITY LEVEL: No data available

TARGET EFFECTS: No data available

HEALTH EFFECTS:

INHALATION:

ACUTE EXPOSURE: No specific data available. Insoluble molybdenum compounds are characterized by low toxicity.

CHRONIC EXPOSURE: 25 one-hour exposures to 490 mg/m³ caused no effects in all the animals tested except one which died after the third exposure.

SKIN CONTACT:

ACUTE EXPOSURE: Dermatitis has not been reported in exposed workers.

CHRONIC EXPOSURE: No data available.

EYE CONTACT:

ACUTE EXPOSURE: No specific data available. Some insoluble molybdenum compounds are irritating to the eyes.

CHRONIC EXPOSURE: No data available.

INGESTION:

ACUTE EXPOSURE: No data available.

CHRONIC EXPOSURE: Rats fed up to 500 mg daily for 44 days showed no toxic signs and all gained weight.

SECTION 12

ECOLOGICAL INFORMATION

No data available

SECTION 13

DISPOSAL INFORMATION

WASTE DISPOSAL: Observe all federal, state and local regulations when disposing of this substance.

SECTION 14

TRANSPORTATION INFORMATION

No classification currently assigned.

SECTION 15

REGULATORY INFORMATION

TSCA STATUS: Y

OTHER REGULATORY INFORMATION AVAILABLE:

CERCLA SECTION 103 (40 CFR 302.4):	N
SARA SECTION 302 (40 CFR 355.30):	N
SARA SECTION 304 (40 CFR 355.40):	N
SARA SECTION 313 (40 CFR 372.65):	N
OSHA PROCESS SAFETY (29 CFR 1910.119):	N
CALIFORNIA PROPOSITION 65:	N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40 CFR 370.21):

ACUTE HAZARD:	N
CHRONIC HAZARD:	N
FIRE HAZARD:	N
REACTIVITY HAZARD:	N
SUDDEN RELEASE HAZARD:	N

SECTION 16

OTHER

No warranty is made, either express or implied. The information contained on this material safety data sheet is offered in good faith as accurate. We have reviewed the information and believe it to be correct but cannot guarantee its accuracy or completeness. Some individuals and/or situations may require health and safety precautions not included on this data sheet. It is the users obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.