

### **MATERIAL SAFETY DATA SHEET**

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION		
IDENTIFICATION OF SUBSTANCE	MOLYBDENUM DISULFIDE	
SYNONYMS	MOLYBDENUM SULFIDE, MOLYBDENITE	
NAME OF THE MANUFACTURER/	OMKAR SPECIALITY CHEMICALS LTD.	
SUPPLIER		
ADDRESS FOR CORRESPONDENCE	W-92 (A), MIDC, Badlapur (E),	
	Dist.Thane - 421503	
	State: Maharashtra (India)	
TEL.NO.:	91-251-2690651/2691602/2697319	
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EMAIL ID:	rishi@bom8.vsnl.net.in/ omkarchem@vsnl.com	

SECTION 2 : COMPOS	N 2 : COMPOSITION AND INFORMATION ON INGREDIENT	
CHEMICAL NAME	MOLYBDENUM DISULFIDE	
CAS NO.	1317 – 33 – 5	
RTECS NO.	QA 4697000	
EINECS NO.	2152639	

SECTION 3 : HAZARD IDENTIFICATION			
APPEARANCE		BLACK POWDER	
TARGET ORGANS		LUNG	
POTENTIAL HEALTH EFFECTS			
EYE	DUST MAY BE	ABRASIVE & IRRITATING TO THE EYES AND	
	CAUSE STING	ING, WATERING & REDNESS	
SKIN	DUST MAY BE ABRASIVE & MILDLY IRRITATING TO SKIN.		
	SKIN ABSORPTION IS UNLIKELY.		
INHALATION	REPEATED OVER EXPLOSURE TO DUST MAY RESULT IN		
	CHRONIC LUN	IG DISEASE.	
INGESTION	LOW TO MODE	ERATE DEGREE OF TOXICITY BY INGESTION.	

SECTION 4 : FIRST-AID MEASURES			
EYE	IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR ATLEAST 15 MINUTES		
	OCCASIONALLY LIFTING LOWER & UPPER EYE LIDS.		
SKIN	IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER ATLEAST FOR 15 MINUTES,		
	WHILE REMOVING CONTAMINATED CLOTHINGS & SHOES.		
INHALATION	REMOVE TO FRESH AIR IMMEDIATELY. IF BREATHING IS DIFFICULT, GIVE OXYGEN.		
	DO NOT USE MOUTH TO MOUTH RESSUSCITATION IF PERSON HAS INHALED THE		
	SUBSTANCE INDUCE ARTIFICIAL RESPIRATION WITH THE AID OF APPROVED		
	MEDICAL DEVICE.		
INGESTION	IF SWALLOWED, WASHOUT MOUTH WITH PLENTY OF WATER PROVIDED A PERSON IS		
	CONSCIOUS. DO NOT INDUCE VOMITING. IF PERSON IS CONSCIOUS, ALLOW HIM		
	TO DRINK 2-4 CUPFULS OF WATER.		

ALWAYS SEEK MEDICAL AID. CONSULT NEAREST POISON CONTROL CENTRE OR PHYSICIAN WHO IS FAMILIAR WITH CHEMICALS AND ITS AFTER EFFECTS. ALL FIRST – AID PROCEDURES SHOULD BE PERIODICALLY REVIEWED BY AN EXPERIENCED PHYSICIAN.

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APPROPRIATE TO SURROUNDING FIRE

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SECTION 5. TIRE - HOTTING WEASONES	
GENERAL INFORMATION	AS IN ANY FIRE, WEAR A SELF-
	CONTAINED BREATHING APPARATUS
	(MSHA/NIOSH)(APPROVED EQUIVALENT)
	& FULLY PROTECTIVE GEAR. THIS
	MATERIAL MAY BURN, BUT WILL NOT
	IGNITEREADILY.
EXTINGUISHING MEDIA	DRY CHEMICAL, CARBON DIOXIDE
	,WATER SPRAY, SAND OR EARTH IS
	RECOMMENDED. CARBON DIOXIDE CAN
	DISPLACE OXYGEN. USE CAUTION WHEN
	APPLYING CARBON DIOXIDE IN
	CONFINED SPACES OR IT SHOULD BE

SECTION 5 · FIRE - FIGHTING MEASURES

### **SECTION 6 : ACCIDENTAL RELEASE MEASURES**

CONDITIONS.

GENERAL INFORMATION	USE PROPER PERSONAL PROTECTIVE
	EQUIPMENTS AS INDICATED IN SECTION
	8. PROVIDE VENTILATION.
SPILLS/LEAK	SWEEP-UP MATERIAL. PLACE INTO A
	SUITABLE LABELED DISPOSAL
	CONTAINER. AVOID GENERATING DUST.
	WASH SPILL SITE, AFTER MATERIAL
	PICK-UP IS COMPLETE. NOTIFY
	GOVERNMENT OCCUPATIONAL, HEALTH,
	SAFETY AND ENVIRONMETAL
	AUTHORITIES. REVIEW FEDERAL /
	STATE / LOCAL GOVERNMENT
	AUTHORITIES REQUIREMENT PRIOR TO
	DISPOSAL.

### SECTION 7: HANDLING & STORAGE

HANDLING	USE ONLY IN A WELL VENTILATED AREA.
	AVOID DUST GENERATION. USE ALL
	SAFETY EQUIPMENTS.
STORAGE	KEEP TIGHTLY CLOSED & STORE IN A
	COOL DRY PLACE. KEEP AWAY FROM
	HEAT, SPARK, SOURCES OF IGNITION,
	STRONG ACIDS.

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#### **SECTION 8: EXPOSURE CONTACT & PERSONAL PROTECTION**

EXPOSURE TO THIS MATERIAL CAN BE CONTROLLED IN MANY WAYS. THE MEASURES APPROPRIATE FOR A PARTICULAR WORKSITE DEPEND ON HOW THIS MATERIAL IS USED AND ON TO THE EXTENT OF EXPOSURE. THIS GENERAL INFORMATION CAN BE USED TO HELP DEVELOP SPECIFIC CONTROL MEASURES. ENSURE THAT, THE CONTROL SYSTEMS ARE PROPERLY DESIGNED AND MAINTAINED. AVOID PROLONGED OR REPEATED EXPOSURE. COMPLY WITH OCCUPATIONAL, ENVIRONMENTAL, FIRE AND OTHER APPLICABLE REGULATIONS.

USE ALL PROTECTIVE SAFETY EQUIPMENTS SUCH AS SAFETY GOGGLES, OR EYE GLASS [AS PER OSHA'S EYE & FACE PROTECTION REGULATIONS IN 29CFR 1910.133 OR EUROPEAN STANDARD EN166], PROPER CLOTHINGS, SAFETY SHOES, APPROVED RESPIRATORS THAT MEETS OSHS'S 29CFR 1910.134 & ANSIZ88.2 REQUIREMENTS OR EUROPEAN STANDARD EN 149 REQUIREMENTS. ALL WAYS CLEAN USED SAFETY EQUIPMENT BEFORE REUSE.

ENGINEERING METHODS TO CONTROL EXPOSURE TO WORK PLACE CHEMICALS ARE PREFERED. METHODS INCLUDE MECHANICAL [LOCAL EXHAUST] VENTILLATION, PROCESS – PERSONNEL ENCLOSURES AND CONTROL OF PROCESS CONDITIONS. ADMINISTRATIVE CONTROL MAY ALSO BE REQUIRED. SUPPLY SUFFICIENT REPLACEMENT AIR TO MAKE – UP FOR AIR REMOVED BY EXHAUST SYSTEM.

FACILITIES SHOULD BE EQUIPPED WITH EYEWASH AND SAFETY SHOWER FACILITIES. APPROPRIATE EQUIPMENTS SHOULD BE AVAILABLE FOR USE IN EMERGENCIES SUCH AS SPILLS OR FIRE EXPOSURE LIMITS.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES		
APPEARANCE / PHYSICAL STATE	:	SOLID (BLACK POWDER)
MOLECULAR FORMULA	:	MoS2
MOLECULAR WEIGHT	:	160.07
BULK DENSITY	:	ABOUT 100lbs / ft3
SPECIFIC GRAVITY	:	ABOUT 1.60
SOLUBILITY IN WATER	:	NIL
FLASH POINT OC	:	NOT APPLICABLE
EXPLOSIVE LIMITS	:	NO DATA
BOILING POINT	:	NO DATA
MELTING POINT	:	NO DATA
VAPOUR PRESSURE	:	NO DATA
VAPOUR DENSITY	:	NO DATA
AUTOIGNITION TEMPERATURE	:	NO DATA



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SECTION 10 : STABILITY & REACTIVITY			
CHEMICAL STABILITY	:	STABLE UNDER NORMAL STORAGE CONDITION	
CONDITIONS TO AVOID	:	STRONG ACIDS	
INCOMPATIBILITY WITH OTHER PRODUCTS	:	STRONG ACIDS	
HAZARDOUS DECOMPOSITION PRODUCTS	:	ON CONTACT WITH ACIDS, MAY CAUSE EVOLUTION OF HYDROGEN SULFIDE	
HAZARDOUS POLYMARIZATION	:	WILL NOT OCCUR	

SECTION 11 : TOXICOLOGICAL INFORMATION			
RTECS NO. QA 4697000			
EC NO. 2152639			

CANCER OF THE LUNG WAS FOUND IN LABORATORY ANIMALS. REPEATED OVER EXPOSURE TO DUSTS MAY RESULT IN PROGRESSIVE AND IRREVERSIBLE LUNG DISEASE CHARACTERISED BY PNEUMOCONIOSIS (DUST CONGESTED LUNGS), CHRONIC BRONCHITIS (LUNG INFLAMMATION) AND FIBROSIS (DEVELOPMENT OF SCAR TISSUE)

SINCE THE MANNER IN WHICH EXPOSURE LIMITS ARE ESTABLISHED, INTERPRETED, IMPLEMENTED CAN VARY, OBTAIN DETAILED INFORMATION FROM APPROPRIATE AGENCIES IN EACH JURISDICTION.

### **SECTION 12: ECOLOGICAL INFORMATION**

NO DATA AVAILABLE. HOWEVER, DO NOT ALLOW MATERIAL TO BE RELEASED TO THE ENVIRONMENT, WITHOUT PROPER GOVERNMENTAL PERMITS.

#### **SECTION: 13 DISPOSAL CONSIDERATIONS**

WASTE GENERATORS MUST DETERMINE WHETHER DISCARDED CHEMICAL WASTE IS CLASSIFIED AS A HAZARDOUS WASTE. US — EPA GUIDE LINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40 CFR PARTS 261.3. COLLECT ALL THE WASTE IN A WELL COVERED / LEAK PROOF / LABELED CONTAINERS AND REVIEW FEDERAL / STATE / LOCAL GOVERENMENT REQUIREMENT PRIOR TO DISPOSAL.

#### **SECTION: 14 TRANSPORT INFORMATION**

THIS SUBSTANCE IS CONSIDERED TO BE NON-HAZARDOUS FOR SEA & AIR TRANSPORT.

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#### **SECTION: 15 REGULATORY INFORMATION**

THIS MATERIAL CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENT OF SARA 313 & 40CFR 372:

COMPONENT	CAS NO.	% WEIGHT
LEAD SULFIDE	1314 – 87 – 0	0- 0.10

WARNING: THIS MATERIAL CONTAINS THE FOLLOWING CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER; BIRTH EFFECTS OR OTHER REPRODUCTIVE HARM & ARE SUBJECT TO THE REQUIREMENT OF CALIFORNIA PROPOSITION 65 (CA HEALTH & SAFETY CODE SECTION 25249.5):

COMPONENT	EFFECT
LEAD & LEAD COMPOUNDS	CANCER, DEVELOPMENTAL AND REPRODUCTIVE TOXICANT
SILICA CRYSTALLINE	CANCER

THIS MATERIAL HAS NOT BEEN IDENTIFIED AS A CARCINOGEN BY NTP, IARC OR OSHA.

PLEASE REFER TO SECTION 4 & 8 OF MSDS

#### **SECTION: 16 ADDITIONAL INFORMATION**

THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPRORIATE PRECAUTIONARY HANDLING OF MATERIAL BY A PERSON TRAINED IN CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS & DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION DEPENDING ON USAGE. ADEQUATE PROTECTIVE CLOTHING, INCLUDING EYE / FACE GUARDS, APPROVED RESPIRATORS MUST BE USED TO AVOID CONTACT WITH THE MATERIAL OR BREATHING CHEMICAL VAPOURS / FUMES.

EXPOSURE TO THIS PRODUCT MAY CAUSE ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, M/S. OMKAR SPECIALITY CHEMICALS LTD. CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH CHEMICALS OF MATERIALS. M/S. OMKAR SPECIALITY CHEMICALS LTD. WARRANTS THAT, THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE TEST REPORT.

M/S. OMKAR SPECIALITY CHEMICALS LTD. DISCLAIMS ANY OTHER WARRANTIES EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

THE USER SHOULD RECOGNISE THAT, THIS PRODUCT CAN CAUSE SEVERE INJURY, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDED.

"READ ALL PRECAUTIONARY INFORMATIONS. "