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M A T E R I A L S A F E T Y D A T A S H E E T

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

CATALOG #: M2277
NAME: MOLYBDENUM TRIOXIDE ACS REAGENT

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

CAS #: 1313-27-5
MF: MOO3
EC NO: 215-204-7

SYNONYMS

MOLYBDENUM(VI) OXIDE * MOLYBDENUMPEROXIDE * MOLYBDIC ACID ANHYDRIDE *
MOLYBDIC ANHYDRIDE * MOLYBDIC ANHYDRIDE * MOLYBDIC TRIOXIDE * NATURAL
MOLYBDITE *

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.

TARGET ORGAN(S):

LIVER
KIDNEYS

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 OR SKIN WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.

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 - - - - -

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.

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.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
HARMFUL SOLID.
IRRITANT.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR
LIGHT-GREEN POWDER
PHYSICAL PROPERTIES

MELTING POINT: 795 C
SPECIFIC GRAVITY: 4.692

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

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

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

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

RTECS #: QA4725000
MOLYBDENUM TRIOXIDE

TOXICITY DATA

ORL-RAT LD50:2689 MG/KG	PERDW# 18JUN1991
IHL-RAT LC50:>5840 MG/M3/4H	PERDW# 18JUN1991
SKN-RAT LD50:>2 GM/KG	PERDW# 18JUN1991
IPR-MUS LD50:141 MG/KG	GTPZAB 9(6),40,1965
SCU-MUS LD50:94 MG/KG	ZVKOA6 19,186,1974

TARGET ORGAN DATA

LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
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 - - - - -

BURY IN A LANDFILL SITE APPROVED FOR THE DISPOSAL OF CHEMICAL
AND HAZARDOUS WASTES.
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: 042-001-00-9
HARMFUL
R 36/37
IRRITATING TO EYES AND RESPIRATORY SYSTEM.
R 48/20/22
HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED
EXPOSURE THROUGH INHALATION AND IF SWALLOWED.
S 22
DO NOT BREATHE DUST.

S 25

AVOID CONTACT WITH EYES.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-TWA 10 MG(MO)/M3

DTLVS* TLV/BEI, 1997

MSHA STANDARD-AIR:TWA 5 MG(MO)/M3

DTLVS* 3,173,1971

OSHA PEL (GEN INDU):8H TWA 5 MG(MO)/M3

CFRGBR 29,1910.1000,1994

OSHA PEL (CONSTRUC):8H TWA 5 MG(MO)/M3

CFRGBR 29,1926.55,1994

OSHA PEL (SHIPYARD):8H TWA 5 MG(MO)/M3

CFRGBR 29,1915.1000,1993

OSHA PEL (FED CONT):8H TWA 5 MG(MO)/M3

CFRGBR 41,50-204.50,1994

OEL-AUSTRALIA:TWA 5 MG(MO)/M3 JAN 1993

OEL-BELGIUM:TWA 5 MG(MO)/M3 JAN 1993

OEL-DENMARK:TWA 5 MG(MO)/M3 JAN 1993

OEL-FINLAND:TWA 5 MG(MO)/M3 JAN 1993

OEL-FRANCE:TWA 5 MG(MO)/M3;STEL 10 MG(MO)/M3 JAN 1993

OEL-GERMANY:TWA 5 MG(MO)/M3 JAN 1993

OEL-THE NETHERLANDS:TWA 5 MG(MO)/M3 JAN 1993

OEL-THE PHILIPPINES:TWA 5 MG(MO)/M3 JAN 1993

OEL-SWITZERLAND:TWA 5 MG(MO)/M3 JAN 1993

OEL-TURKEY:TWA 5 MG(MO)/M3 JAN 1993

OEL-UNITED KINGDOM:TWA 5 MG(MO)/M3;STEL 10 MG/M3 JAN 1993

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

NOHS 1974: HZD 84549; NIS 6; TNF 175; NOS 14; TNE 5269

NOES 1983: HZD 84549; NIS 16; TNF 1346; NOS 28; TNE 48418; TFE 1530

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JUNE 1998

NTP CARCINOGENESIS STUDIES (INHALATION);SOME EVIDENCE:MOUSE

NTPTR* NTP-TR-462,1997

NTP CARCINOGENESIS STUDIES (INHALATION);EQUIVOCAL EVIDENCE:RAT

NTPTR* NTP-TR-462,1997

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - 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, ALDRICH, FLUKA 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.

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