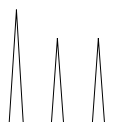




ZirChrom Separations, Inc.
 P.O. Box 868
 Anoka, MN 55303
 Telephone 763-421-5264



MATERIAL SAFETY DATA SHEET
ZirChrom®-MS

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SECTION I - Product Identification

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PRODUCT NAME: ZirChrom® -MS
 FORMULA: ZrO₂
 FORMULA WT: 123.22
 CAS NO.: 1314-23-4
 COMMON SYNONYM: ZIRCONIA

MANUFACTURER/SUPPLIER: ZirChrom Separations, Inc.
 617 Pierce St.
 Anoka, MN 55303
 (763)421-5264

EMERGENCY #: Chemtrec (USA): (800) 424-9300

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Precautionary Labeling

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HEALTH - 1
 FLAMMABILITY - N/A
 REACTIVITY - N/A

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SECTION II - Hazardous Components - NONE

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SECTION III - Physical Data

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BOILING POINT: 4300C VAPOR PRESSURE @ 20C (MM HG): N/A
 MELTING POINT: 2680C VAPOR DENSITY (AIR=1): N/A
 SPECIFIC GRAVITY: 5.7 EVAPORATION RATE: N/A
 (H₂O=1) (BUTYL ACETATE=1)
 SOLUBILITY(H₂O): INSOLUBLE PERCENT VOLATILES BY VOLUME: N/A
 APPEARANCE & ODOR: WHITE POWDER OR CRYSTALS

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SECTION IV - Fire and Explosion Hazard Data

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FLASH POINT: NONE
 FLAMMABLE LIMITS: UPPER - N/A % LOWER - N/A %
 FIRE EXTINGUISHING MEDIA
 CO₂, DRY CHEMICAL, FOAM
 SPECIAL FIRE-FIGHTING PROCEDURES
 WEAR SELF-CONTAINED BREATHING APPARATUS
 UNUSUAL FIRE AND EXPLOSION HAZARDS - NONE INDICATED

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SECTION V - Health Hazard Data

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THRESHOLD LIMIT VALUE (TLV/TWA): TLV - 5 MG/M³ (AS ZR) IDLH - 500 MG/M³
 EFFECTS OF OVEREXPOSURE LUNG, SKIN GRANULOMAS; ALLERGIC REACTION.
 AVOID SKIN CONTACT AND INHALATION
 EMERGENCY AND FIRST AID PROCEDURES
 EYES: FLUSH IMMEDIATELY AND THOROUGHLY WITH WATER

SKIN: WASH WITH SOAP AND WATER
INHALATION: REMOVE TO FRESH AIR; GIVE ARTIFICIAL RESPIRATION IF NECESSARY.
INGESTION: GIVE ONE OR TWO GLASSES OF WATER AND INDUCE VOMITING IF CONSCIOUS.
GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE

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SECTION VI - Reactivity Data

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STABILITY: STABLE
DECOMPOSITION PRODUCTS: NONE

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SECTION VII - Spill and Disposal Procedures

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NO FURTHER SAFETY OR ENVIRONMENTAL CONSIDERATIONS FOR ACCIDENTAL RELEASE. DISPOSE OF IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL AND NATIONAL REGULATIONS.

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SECTION VIII - Protective Equipment

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HANDLING AND TRANSFER SHOULD BE MADE WITHIN AN APPROVED FUME HOOD OR WITH ADEQUATE VENTILATION. WEAR DUST MASK OR CARTRIDGE RESPIRATOR. GLOVES SHOULD BE WORN

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SECTION IX - Storage and Handling Precautions

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STORE IN A DRY AREA

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N/A = Not Applicable

The information published in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. We reserve the right to revise Material Safety Data Sheets periodically as new information becomes available.