

# SAFETY DATA SHEET

FILE NO.:MR 001.02

NAME OF PRODUCT Molybdenum - Rhenium

SDS DATE: 4 / 8 / 2014

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: Molybdenum - Rhenium

SYNONYMS:

PRODUCT CODES: (Mo , RE )

MANUFACTURER: Rhenium Alloys

DIVISION:

ADDRESS: 38683 Taylor Parkway, North Ridgeville Ohio 44039

EMERGENCY PHONE: (440) 365-7388

CHEMTREC PHONE: (440) 365-7388

OTHER CALLS: 1-888 - RHENIUM

FAX PHONE: (440) 366 - 9831

CHEMICAL NAME: Molybdenum - Rhenium

CHEMICAL FAMILY: n/a

CHEMICAL FORMULA: Molybdenum - Rhenium

PRODUCT USE: manufacturing

PREPARED BY: Rhenium Alloys

SECTION 1 NOTES:

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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### INGREDIENT:

| <u>CAS NO.</u>         | <u>% WT</u> | <u>% VOL</u> | <u>SARA 313 REPORTABLE</u> |
|------------------------|-------------|--------------|----------------------------|
| Mo                     | 52 - 59     | n/a          | n/a                        |
| Re                     | 41 - 48     |              |                            |
|                        | <u>ppm</u>  | <u>mg/m3</u> |                            |
| OSHA PEL-TWA: Mo       | n/a         | 15mg/M3      |                            |
| OSHA PEL STEL : n/a    |             |              |                            |
| OSHA PEL CEILING: n/a  |             |              |                            |
| ACGIH TLV-TWA: Mo      | n/a         | 10mg/M3      |                            |
| ACGIH TLV STEL: n/a    |             |              |                            |
| ACGIH TLV CEILING: n/a |             |              |                            |

SECTION 2 NOTES:

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## SECTION 3: HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW: No long term or cumulative effects known for either molybdenum or rhenium

ROUTES OF ENTRY: n/a

POTENTIAL HEALTH EFFECTS

EYES: n/a

SKIN: n/a

INGESTION: n/a

INHALATION: n/a

ACUTE HEALTH HAZARDS: none

CHRONIC HEALTH HAZARDS: none

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: none

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## CARCINOGENICITY

OSHA: n/a

ACGIH: n/a

NTP: n/a

IARC: n/a

OTHER:

## SECTION 3 NOTES:

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## SECTION 4: FIRST AID MEASURES

EYES:n/a

SKIN:n/a

INGESTION:n/a

INHALATION: local exhaust if hot working

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

## SECTION 4 NOTES:

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## SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: n/a  
(% BY VOLUME) LOWER: n/a

FLASH POINT:n/a

F:

C:

METHOD USED:n/a

AUTOIGNITION TEMPERATURE: n/a

F: n/a

C: n/a

### NFPA HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

OTHER:

### HMIS HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

PROTECTION:

EXTINGUISHING MEDIA:n/a

SPECIAL FIRE FIGHTING PROCEDURES: n/a

UNUSUAL FIRE AND EXPLOSION HAZARDS: n/a

HAZARDOUS DECOMPOSITION PRODUCTS: n/a

## SECTION 5 NOTES:

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: NO SPECIAL PRECAUTIONS NEEDED

## SECTION 6 NOTES:

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## SECTION 7: HANDLING AND STORAGE

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HANDLING AND STORAGE: AVOID MOIST ENVIRONMENT , EDGES OF SHEET WILL HAVE SHARP EDGES

OTHER PRECAUTIONS: N/A

SECTION 7 NOTES:

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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ENGINEERING CONTROLS: N/A

VENTILATION : LOCAL EXHAUST IF HOT WORKING

RESPIRATORY PROTECTION: N/A

EYE PROTECTION: SAFETY GOOGLES IF GRINDING OR CUTTING

SKIN PROTECTION:LEATHER PALM GLOVES TO PREVENT CUTS

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR DRINKING

EXPOSURE GUIDELINES: N/A

SECTION 8 NOTES:

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE: SILVER METALLIC SHEET , ROD , TUBE , OR WIRE

ODOR: NONE

PHYSICAL STATE: SOLID

pH AS SUPPLIED: N/A

pH (Other): N/A

BOILING POINT:N/A

F: N/A

C: N/A

MELTING POINT:

F: N/A

C: 2500C

FREEZING POINT:N/A

F: N/A

C: N/A

VAPOR PRESSURE (mmHg): N/A

@

F:

C:

VAPOR DENSITY (AIR = 1):N/A

@

F:

C:

SPECIFIC GRAVITY (H2O = 1):14

@

F:

C:

EVAPORATION RATE: N/A

BASIS (=1): N/A

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

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SOLUBILITY IN WATER: NO

PERCENT SOLIDS BY WEIGHT:

PERCENT VOLATILE: N/A  
BY WT/ BY VOL @

F:

C:

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

WITH WATER: LBS/GAL  
WITHOUT WATER: LBS/GAL

MOLECULAR WEIGHT: N/A

VISCOSITY:

@

F:

C:

SECTION 9 NOTES:

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## SECTION 10: STABILITY AND REACTIVITY

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STABLE  
X

UNSTABLE

STABILITY: YES

CONDITIONS TO AVOID (STABILITY): TEMPERATURE ABOVE 400 C IN A NON-REDUCING OR OXIDIZING ATMOSPHERE

INCOMPATIBILITY (MATERIAL TO AVOID): OXIDIZERS

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Above 400c may form MoO3 – irritating to nose , eyes, mucous membranes

HAZARDOUS POLYMERIZATION: will not occur

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 10 NOTES:

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## SECTION 11: TOXICOLOGICAL INFORMATION

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TOXICOLOGICAL INFORMATION: n/a

SECTION 11 NOTES: n/a

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## SECTION 12: ECOLOGICAL INFORMATION

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ECOLOGICAL INFORMATION: n/a

SECTION 12 NOTES: n/a

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## SECTION 13: DISPOSAL CONSIDERATIONS

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WASTE DISPOSAL METHOD: Retain segregated scrap for reclamation

RCRA HAZARD CLASS:n/a

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## SECTION 13: DISPOSAL CONSIDERATIONS (con't)

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SECTION 13 NOTES: n/a

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## SECTION 14: TRANSPORT INFORMATION

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### U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Molybdenum - Rhenium

HAZARD CLASS: 0

ID NUMBER: MR 001.02

PACKING GROUP: n/a

LABEL STATEMENT:n/a

### WATER TRANSPORTATION

PROPER SHIPPING NAME: Molybdenum - Rhenium

HAZARD CLASS: 0

ID NUMBER: MR 001.02

PACKING GROUP: n/a

LABEL STATEMENTS: n/a

### AIR TRANSPORTATION

PROPER SHIPPING NAME: Molybdenum - Rhenium

HAZARD CLASS: 0

ID NUMBER: MR 001.002

PACKING GROUP: n/a

LABEL STATEMENTS: n/a

OTHER AGENCIES:

SECTION 14 NOTES:

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## SECTION 15: REGULATORY INFORMATION

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### U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT):n/a

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):n/a

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):n/a

311/312 HAZARD CATEGORIES:n/a

313 REPORTABLE INGREDIENTS:n/a

STATE REGULATIONS:n/a

INTERNATIONAL REGULATIONS:n/a

SECTION 15 NOTES:

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## SECTION 16: OTHER INFORMATION

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OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER: RHENIUM ALLOYS MAKES NO RESPONSIBILITY REGARDING THE ACCURACY OF THE INFORMATION AND ASSUMES NO RESPONSIBILITY WHICH MAY OCCUR DUE TO THE HANDLING OF THE MATERIAL