



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet  
Rubidium

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1. Product and Company Identification

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|------------------------|--|
| Trade Name:            | Rubidium                               |
| Chemical Formula:      | Rb                                     |
| Manufacturer/Supplier: | XI'AN FUNCTION MATERIAL GROUP CO., LTD |
| Street:                | No. 69, Gazelle Valley, High-Tech Zone |
| City:                  | XI'AN                                  |
| State:                 | Shaanxi                                |
| Zip Code:              | 710077                                 |
| Country:               | China                                  |
| Tel #:                 | +86-29-88993870/+86-13519132051        |

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2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H260: In contact with water releases flammable gases which may ignite spontaneously  
H314: Causes severe skin burns and eye damage  
H318: Causes serious eye damage  
H335: May cause respiratory irritation

Precautionary Statements:

P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire  
P231+P232: Handle under inert gas. Protect from moisture  
P260: Do not breathe dust/fume/gas/mist/vapors/spray  
P264: Wash face, hands and any exposed skin thoroughly after handling  
P271: Use only outdoors or in a well-ventilated area  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340+P310: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician  
P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician  
P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages  
P363: Wash contaminated clothing before reuse

P370+P378: In case of fire: Use CO<sub>2</sub>, dry sand, dry chemical or alcohol-resistant foam for extinction  
P402+P404: Store in a dry place. Store in a closed container  
P403+P233: Store in a well-ventilated place. Keep container tightly closed  
P405: Store locked up  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

|               |   |
|---------------|---|
| Health:       | 3 |
| Flammability: | 3 |
| Physical:     | 3 |

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### 3. Composition

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|                   |                |
|-------------------|----------------|
| Chemical Family:  | Metal          |
| Additional Names: | Rubidium Metal |

Rubidium (Rb)

|             |           |
|-------------|-----------|
| Percentage: | 100 wt%   |
| CAS #:      | 7440-17-7 |
| EC #:       | 231-126-6 |

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### 4. First Aid Procedures

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| General Treatment:  | Seek medical attention if symptoms persist. |
| Special Treatment:  | None  |
| Important Symptoms: | N/A   |

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| Inhalation: | Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention. |
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|            |  |
|------------|--|
| Ingestion: | Rinse mouth with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention. |
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|       |  |
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| Skin: | Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention. |
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|       |   |
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| Eyes: | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention. |
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### 5. Firefighting Measures

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|---------------|---------------------|
| Flammability: | Flammable as powder |
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| Extinguishing Media: | Do not use water for metal fires. Use alcohol-resistant foam, dry chemical, carbon dioxide or other approved class D extinguishers. |
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| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products. |
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### 6. Accidental Release Measures

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| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. |
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|                            |  |
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| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |
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## 7. Handling and Storage

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| Handling Conditions:       | Wash thoroughly after handling.  |
| Storage Conditions:        | Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.                       |
| Work/Hygienic Maintenance: | Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. |
| Ventilation:               | Provide sufficient ventilation to maintain concentration at or below threshold limit.  |

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## 8. Exposure Controls and Personal Protection

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|                              |   |
|------------------------------|---|
| Permissible Exposure Limits: | N/A   |
| Threshold Limit Value:       | N/A   |
| Special Equipment:           | None  |
| Respiratory Protection:      | Use a recommended dust respirator or mask. Only use equipment tested and approved under appropriate government standards. |
| Protective Gloves:           | Nitrile or rubber gloves  |
| Eye Protection:              | Safety glasses or goggles   |
| Body Protection:             | Protective work clothing. Wear close-toed shoes and long sleeves/pants.   |

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## 9. Physical and Chemical Characteristics

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|                           |  |
|---------------------------|--|
| Color                     | N/A  |
| Form:                     | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor:                     | N/A  |
| Water Solubility:         | N/A  |
| Boiling Point:            | 688 °C   |
| Melting Point:            | 38.9 °C  |
| Flash Point:              | N/A  |
| Autoignition Temperature: | N/A  |
| Density:                  | 1.532 g/cc   |
| Molecular weight:         | 85.47 g/mol  |

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## 10. Reactivity

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|-----------------------------------|---|
| Stability:                        | Stable under recommended storage conditions                                       |
| Reacts With:                      | Acids, Oxidizing agents, Water, Sulphur compounds, Halogens, Chlorinated solvents |
| Incompatible Conditions:          | Exposure to moisture and water. Reacts violently with water                       |
| Hazardous Decomposition Products: | Rubidium oxides   |

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## 11. Toxicological Information

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|--------------------------------|---|
| Potential Health Effects:      |   |
| Eyes:                          | Causes serious damage                                     |
| Skin:                          | Causes severe burns                                       |
| Ingestion:                     | Causes severe swelling, severe damage to delicate tissues |
| Inhalation:                    | May cause irritation                                      |
| Chronic:                       | N/A   |
| Signs & Symptoms:              | Causes burns by all exposure routes.                      |
| Aggravated Medical Conditions: | N/A   |
| Median Lethal Dose:            | LD50 Intraperitoneal - Mouse - 1,200 mg/kg                |
| Carcinogen:                    | N/A   |

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## 12. Ecological Information

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| Aquatic Toxicity:                      | May cause long-term adverse effects |
| Persistent Bioaccumulation Toxicity:   | May persist                         |
| Very Persistent, Very Bioaccumulative: | N/A                                 |
| Notes:                                 | N/A                                 |

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## 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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## 14. Transportation Data

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| Hazardous: | Hazardous as powder only |
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|                       |                                  |
|-----------------------|----------------------------------|
| Hazard Class:         | 4.3 Dangerous when wet materials |
| Packing Group:        | I                                |
| UN Number:            | UN1423                           |
| Proper Shipping Name: | Rubidium                         |

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## 15. Regulatory Information

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| Sec 302 Extremely Hazardous:   | No  |
| Sec 304 Reportable Quantities: | N/A |
| Sec 313 Toxic Chemicals:       | No  |

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## 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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