LTS Research Laboratories, Inc.
Safety Data Sheet
Magnesium Arsenide

## 1. Product and Company Identification

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| Trade Name: | Magnesium Arsenide |
| Chemical Formula: | $Mg_3As_2$ |
| Recommended Use: | Scientific research and development |
| Manufacturer/Supplier: | LTS Research Laboratories, Inc. |
| Street: | 37 Ramland Road |
| City: | Orangeburg |
| State: | New York |
| Zip Code: | 10962 |
| Country: | USA |
| Tel #: | 855-587-2436 / 855-lts-chem |
| 24-Hour Emergency Contact: | 800-424-9300 (US & Canada)<br>+1-703-527-3887 (International) |

## 2. Hazards Identification

Signal Word: Danger

Hazard Statements: H301+H331: Toxic if swallowed or if inhaled.

Precautionary Statements:
P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

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| Health: | 3 |
| Flammability: | 0 |
| Physical: | 1 |

## 3. Composition

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| Chemical Family: | Ceramic |
| Additional Names: | N/A |
| Magnesium Arsenide ($Mg_3As_2$): | |
| Percentage: | 100 wt% |
| CAS #: | 12044-49-4 |
| EC #: | 234-954-6 |

## 4. First Aid Procedures

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| General Treatment: | Seek medical attention if symptoms persist. |
| Special Treatment: | None |
| Important Symptoms: | None |
| Inhalation: | Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention. |
| Ingestion: | Seek immediate medical attention. |
| Skin: | Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention. |
| Eyes: | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention. |

## 5. Firefighting Measures

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| Flammability: | Non-flammable, except as powder |
| Extinguishing Media: | Do not use water for fires – use $CO_2$, sand, extinguishing powder. |
| 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. |

## 6. Accidental Release Measures

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| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. 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. |
| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |

## 7. Handling and Storage

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| Handling Conditions: | Handle under dry protective gas. Avoid contact with skin and eyes. Wash thoroughly after handling. |
| Storage Conditions: | Store in a cool dry place in a tightly sealed container. Store under dry inert gas. 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. |

## 8. Exposure Controls and Personal Protection

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| Permissible Exposure Limits: | 0.5 $mg/m^3$ as As, long-term value |
| Threshold Limit Value: | 0.1 $mg/m^3$ as As, long-term value |
| Special Equipment: | Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. |
| Respiratory Protection: | Dust Respirator |
| Protective Gloves: | Rubber gloves |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

## 9. Physical and Chemical Characteristics

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| Color | Brown |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | N/A |
| Boiling Point: | N/A |
| Melting Point: | 800 °C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 3.148 g/cc |
| Molecular weight: | 222.76 g/mol |

## 10. Reactivity

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| Stability: | Stable under recommended storage conditions |
| Reacts With: | Oxidizing agents |
| Incompatible Conditions: | None |
| Hazardous Decomposition Products: | Metal oxide fume |

## 11. Toxicological Information

Potential Health Effects:

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| Eyes: | May cause irritation |
| Skin: | May cause irritation |
| Ingestion: | Toxic if swallowed |
| Inhalation: | Toxic if inhaled |
| Chronic: | Inhalation of magnesium compounds may cause metal fume fever. Metallic magnesium which perforates the skin may cause local lesions. Some magnesium salts have produced muscle weakness, cardiac arrhythmias, respiratory effects and changes in blood chemistry following ingestion. Acute arsenic poisoning from ingestion results in marked irritation of the stomach and intestines with nausea, vomiting and diarrhea. In severe cases, the vomitus and stools are bloody, and the patient goes into collapse and shock with weak, rapid pulse, cold sweats, coma and death. Chronic arsenic poisoning may cause disturbances of the digestive system such as loss of appetite, cramps, nausea, constipation or diarrhea. |

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| Signs & Symptoms: | N/A |
| Aggravated Medical Conditions: | N/A |
| Median Lethal Dose: | N/A |
| Carcinogen: | EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer.<br>IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.<br>ACGIH A1: Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence in, exposed humans.<br>NTP-K: Known to be carcinogenic: sufficient evidence from human studies. |

## 12. Ecological Information

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| Aquatic Toxicity: | N/A |
| Persistent Bioaccumulation Toxicity: | N/A |
| Very Persistent, Very Bioaccumulative: | N/A |

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| Notes: | Do not allow material to be released to the environment without proper governmental permits.<br>Do not allow product to reach ground water, water course or sewage system, even in small quantities.<br>Danger to drinking water if even extremely small quantities leak into the ground.<br>Also poisonous for fish and plankton in water bodies.<br>May cause long lasting harmful effects to aquatic life.<br>Very toxic to aquatic organisms.<br>Avoid transfer into the environment. |

## 13. Disposal Considerations

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

## 14. Transportation Data

Hazardous: Hazardous as powder only.


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| Hazard Class: | 6.1 Toxic substances |
| Packing Group: | II |
| UN Number: | UN1557 |
| Proper Shipping Name: | Arsenic compounds, solid, n.o.s. (Magnesium Arsenide) |

## 15. Regulatory Information

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

## 16. Other Information

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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