SAFETY DATA SHEET

ROCKMOUNT Welding Alloys

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: GEMINI S

ROCKMOUNT RESEARCH & ALLOYS, INC.
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2. HAZARDS IDENTIFICATION

Emergency Overview: These products are normally not considered hazardous as shipped. Avoid inhalation of dust or eye contact from these produces. When these produces are used in a welding process, the most important hazards are heat, radiation, electric shock and inhalation of welding fumes.
Classification of the Substance/Mixture

CLP/GHS Classification (1272/2008):
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

EU Classification (67/548/EEC.
This substance is not classified as dangerous according to Directive 67/548/EEC.

Symbols: Void
Signal Word: Void
Hazard Statements: Void
Precautionary Statement: Void

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS #	Range %	OSHA PEL TWA	ACGIH-TLV TWA	Carcinogenicity	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)
Tin	7440-31-5	87-97	2	2	No	Not Dangerous	Not Hazardous
#Silver	7440-22-4	1-11	0.01	0.1	No	Not Dangerous	Not Hazardous

Important: This section covers the materials of which the products manufactured. The fumes and gases produced during normal use of this product are covered in section 10. The term "Hazardous" in "Hazardous Material" should be interpreted as a term required and defined in OSHA Hazard Communication Standard 29CFR 1910-1200 and it does not necessarily imply the existence of hazard. The chemicals or compounds reportable by Section 313 of SARA are marked by the symbol #.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing give artificial respiration. Get medical attention immediately.
Skin: Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
Eye: Flush eyes with water for at least 15 minutes. Get medical attention.
Ingestion: Call a physician immediately. Rinse mouth.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, foam, carbon dioxide, water spray or fog is recommended.
Unsuitable Extinguishing Media: Do not use water on molten metal.
Specific Hazards Arising From Chemical: FIRE HAZARD: When heated in chlorine, Tin reacts, producing light and much heat. In the presence of water, cupric nitrate and tin foil, on prolonged intimate contact, will produce flaming and sparking. Sodium Peroxide and Potassium Peroxide, Potassium Dioxide, oxidized Tin with incandescence. The reaction between tin and tellurium attains incandescence. EXPLOSION HAZARD: Tin reacts violently or explosively with fused ammonium nitrate below 200 deg. C. Contact of metallic tin and turpentine may cause fires and explosions. Finely divided dust may form explosive mixture with air. Do not plunge damp or wet solder bars/pieces into molten solder. Silver/silver oxides, Tin oxide.
Protective Equipment: As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Refer to section 8.
Environment Precautions: Refer to section 13.
Cleaning Measures: Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep away from flames, sparks or hot surfaces. Wash thoroughly after handling and before handling food.
Storage Procedures: Store in a cool dry area out of direct sunlight. Do not store above 25 deg. C (77 deg. F).

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls: Ventilation systems. Use adequate ventilation to keep the exposure levels below the OELs.
Personal protection: Safety glasses with side-shields. Chemical resistant apron. Protective gloves.
Respiratory protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable limits, use NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Hands protection: Wear appropriate gloves to prevent skin contact.
EN 12477: Protection gloves for welders

Requirements (EN Levels)	Type A	Type B
Abrasion (Cycles)	2 (500)	1 (100)
Cut (Factor)	1 (1.2)	1 (1.2)
Tear (Newton)	2 (25)	1 (10)
Puncture (Newton)	2 (60)	1 (20)
Burning Behavior	3	2
Contact Heat	1	1
Convective Heat	2	-
Small Splashes	3	2
Dexterity	1 (11)	4 (6.5)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid
Color: Bare
Odor: Odorless
Odor Threshold: Not Available
pH Value: Not Available
Melting Point/Melting Range: 1560-2000 Degrees F, 850-1100 Degrees C
Freezing Point: Not Available
Boiling Point/Boiling Range: Not Available
Flash point: Not Available
Evaporation Rate: Not Available
Self-in flammability: Not Available
Explosion limits: Not Available
Vapor pressure: Not Available
Vapor density: Not Available
Relative density: 6-9 g/cm3
Specific Gravity: Not Available
Solubility: Insoluble in water
Partition coefficient: Not Available
Auto-ignition temperature: Not Available
Volatile Organic compounds: Not Available
Other Information: No available data.

10. STABILITY AND REACTIVITY

Chemical Stability: This product is stable under normal conditions.
Conditions to Avoid: Not applicable.
Incompatible Materials: Incompatible with Bromine, Bromine Trifluoride Chlorine, Chlorine Trifluoride + Carbon, Water + Cupric Nitrate, Sodium Peroxide, Water Vapor + Carbon Tetrachloride, Disulfuric Dichloride, fused with Ammonium Nitrate, Potassium Dioxide, Tellurium, Turpentine, Acids (Nitric Acid, Sulfuric Acid, Hydrochloric Acid, Acetic Acid), caustic Alkali, Iodine Bromide. In presence of water vapor, the interaction between Tin and Carbon Tetrachloride is violent. The interaction between Tin and Disulfuric Dichloride is violent. Tin reacts violently with Iodine Bromide.
Hazardous Decomposition Products: When this product is used in a welding process, hazardous decomposition product would include those from volatization, reaction or oxidation of the material listed in section 3 and those from the base metal and coating. The amount of fumes generated from this product varies with welding parameters and dimensions.
Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in section 3. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quality of fumes and gases produced.

11. TOXICOLOGICAL INFORMATION

Signs and Symptoms of Overexposure: Fumes and gasses generated during use of this product, in conjunction with heating, welding, brazing or soldering procedures, can be dangerous to your health. Aggravation of pre-existing respiratory or allergic conditions may occur.
Acute Effects: Tin: May cause skin irritation. May cause eye irritation due to mechanical action. Inhalation of tin dust may cause a respiratory tract and mucous membrane tract irritation due to mechanical action. It is poorly absorbed from the digestive tract. It can cause gastrointestinal tract disturbance which may be irritant or astringent on the stomach. Silver may cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver).

LD/LC50 Values that are relevant for classification		
Silver 7440-22-4		
Oral	LD50	>5000 mg/kg (rat)

Chronic Effects: Overexposure to welding fumes may affect pulmonary function. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many organs.

12. ECOLOGICAL INFORMATION

Note: Ecological studies have not been conducted for this product. The following information is available for components of this product.
Ecotoxicity: Hydrotreated Naphthenic Oil - 96 HR LC50, Fathead minnow: >30,000 mg/L (static).
Degradability: This product is not readily biodegradable.
Bioaccumulation / Accumulation: No information available.
Mobility in Environment: No information available.

13. DISPOSAL CONSIDERATIONS

Do not dump into any sewers, on ground or into any body of water. Send to a permitted recycler. All disposal activities must comply with federal, state, provincial and local regulations.

14. TRANSPORT INFORMATION

UN-number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class: Not applicable
Environmental hazards: Not applicable

15. REGULATORY INFORMATION

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None
Section 311/312 Hazard Categories:
Acute Health Hazard - Yes
Chronic Health Hazard - Yes
Fire Hazard - Yes
Sudden Release of Pressure Hazard - No
Reactive Hazard - Yes
Section 313 Toxic Chemicals: None
Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: None
California Proposition 65:
This product contains the following Proposition 65 chemical. None
Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.
Silver **Threshold: .01 mg/m3**

16. OTHER INFORMATION

The information in this document is believed to be correct as of the date issued. However, no warranty is expressed to be implied regarding the accuracy or completeness of this information. This information and product are furnished on the condition that the person receiving them shall make his own determinations as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.
This Safety Data Sheet complies with the EC directives 91/155/EEC and 93/112/EEC, including modifications 2001/58/EC. Complies with OSHA Communication Standard 29 CFR 1910.1200 and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499.

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