



MATERIAL SAFETY DATA SHEET	ALMIT CORED SOLDER WIRE
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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name	Almit Cored Solder Wire
Products covered by these Safety Data Sheet's	KR-19 SH RMA, KR-19 SH RMA (Ag2), KR-19 RMA, KR-19 RMA SN 10, KR-19 60 A, KR-19 50A Cu, KR-15, KR-28, SJ-7, HANDY REEL™. Other specs. as applicable.
Manufacturer / Supplier	Almit Technology Ltd.
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SECTION 2. COMPOSITION AND INFORMATION ON THE INGREDIENTS

Preparation - Hazardous Components (% w/w)						
Colophony	Tin	Lead	Silver	Bismuth	Copper	Antimony
1 – 10	10.00 - 60.00	30.00 - 90.00	1.00 - 3.00	1.00 - 15.00	0 - 3.00	0 - 1.00
R42/43	R36/37/38	R20/21/22/33	R36/37/38	TBA	TBA	TBA
Irritant	Not Classified	Not Classified	Not Classified	TBA	TBA	TBA

SECTION 3. HAZARDS IDENTIFICATION

Main Hazards	Contact with the molten liquid will cause severe burns. Repeated exposure may cause cumulative effects. Sensitisation by Skin Contact. See also Hazardous products of Decomposition.
Health Effects - Eyes	Molten liquid will cause severe burns and may result in blindness. Rosin core may cause conjunctival irritation and poss. corneal damage.
Health Effects - Skin	Contact with the molten liquid will cause severe burns. Repeated or prolonged contact with the Flux core may cause Itching, Sensitisation, Soreness, Defatting of the skin and Dermatitis.
Health Effects - Ingestion	Contact with the molten liquid will cause severe burns. Solder alloy contains Lead which is a cumulative poison and slow elimination from the body. Long term exposure may include:- Constipation or Diarrhoea, Fatigue, Anorexia, Abdominal pain, Reduction in the oxygen carrying capacity of the blood. Swallowing may cause irritation of the mouth & digestive tract. Inhalation of fumes may cause Pulmonary sensitisation, and Asthma.

SECTION 3. HAZARDS IDENTIFICATION (Continued)	
Health Effects - Inhalation	Inhalation of dust and/or fumes will result in symptoms similar to those for ingestion, also Gastrointestinal irritation and Vomiting. Repeated exposure coupled with slow elimination may result in accumulation. Lead absorbed into the body of a pregnant woman can cause developmental abnormalities in the nervous system of the foetus.

SECTION 4. FIRST AID MEASURES	
Eye contact	Flood the eye immediately with copious amounts of cool fresh water for 10 - 15 mins. Pay particular attention to under the eyelids. Call for immediate medical attention.
Skin contact	Wash the skin with soap and warm water. If any soreness or inflammation persists call for medical attention. Wash all contaminated workwear before re-use. After contact with molten liquid, flood with cold water. Call for immediate medical attention.
Ingestion	Do not induce vomiting. Keep warm and rest. Wash out mouth. Call for immediate medical attention.
Inhalation	Remove at once to fresh air. Keep warm and rest. Call for immediate medical attention if there is any respiratory distress.

SECTION 5. FIRE FIGHTING MEASURES	
Extinguishing media	Use an Alcohol resistant foam, Water spray, Dry chemical or Carbon Dioxide. Sand may be used for small fires.
Unsuitable Extinguishing media	Do NOT use water jet.
Special hazards	Gives off hazardous fumes in a fire.
Fire fighters protective equipment	Wear full protective clothing and Self contained breathing apparatus operating in the positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES	
Personal precautions	Wear the appropriate protective clothing.
Environmental precautions	Prevent any material entering watercourses and drains etc. Advise the Local and River authorities if spillage has entered watercourses soil or vegetation.
Spillage	Wipe up with disposable towels, transfer waste into a suitable container for safe disposal. Avoid creating dust.

SECTION 7. HANDLING AND STORAGE	
Handling	Avoid contact with the eyes and skin. Avoid breathing fumes and dust. Use local exhaust ventilation. Avoid contaminated workwear.
Storage	Store in a cool dry ventilated area in manufactures containers. Ensure correctly labelled.

SECTION 8. PERSONAL PROTECTION AND EXPOSURE CONTROL

National standards for Occupational Exposure Colophony Lead Tin Silver Bismuth Antimony Copper	<p>See also Regulatory Information.</p> <p>Capable of causing respiratory sensitisation. Rosin core solder pyrolysis products (as Formaldehyde). UK EH40: MEL 0.05 mg/m³ 8 hr TWA. UK EH40: MEL, STEL 0.15mg/m³ 15 mins. Control of Lead at Work Regulations: 0.15 mg/m³ 8 hr TWA. UK EH40: OES 2mg/m³ 8 hr TWA. UK EH40: OES, STEL 4mg/m³ 15 mins. UK EH40: OES 0.1mg/m³ 8h TWA. TBA UK EH40: MEL 0.5 mg/m³ 8hr TWA. Copper dusts and mists UK EH40: OES 1mg/m³ 8 hr TWA. UK EH 40: OES , STEL 2mg/m³ 15 mins</p>
Engineering control procedures	<p>Engineering solutions should be implemented to prevent or reduce exposure to soldering fumes and dust. Fumes from Soldering should not be inhaled. This should include process or personnel enclosure, Mechanical dust and fume extraction to atmosphere / scrubber. Control of process to reduce or eliminate emissions. Documented process and safety controls and personnel protection, Gloves, Masks etc.</p>
Respiratory protection	Where there is a high risk to fume and dust ingestion a respirator should be worn.
Hand protection	When handling hot liquid (to be avoided if possible) thick thermally insulating gloves should be worn. Avoid damp or wet gloves. Wash hands after handling with soap & warm water, particularly before eating or drinking.
Eye and Facial protection	A full heat resistant helmet face shield should be worn, when handling hot liquid. Goggles or Safety glasses as appropriate.
Body protection	Normal industrial workwear, avoid exposed skin.

Biological Standards

For blood lead monitoring and medical surveillance requirements, refer to the HSC Approved code of practice supporting the Control of Lead at Work Regulations.

Employees should be under medical surveillance **IF** the Risk Assessment made under the Control of Lead at Work Regulations indicates they are likely to be exposed to significant concentrations of lead, or if the Company medical advisor or a Doctor certifies that an employee should be under medical surveillance.

A female employed on work which exposes her to lead **MUST** notify her employer as soon as possible if she becomes pregnant. The Company medical Adviser should be advised of her pregnancy and working environment i.e.: **Exposure to Lead.**

Under the management of Health And Safety at Work (Amendment) Regulations 1994 employers should assess the risks at work to the health of pregnant workers, those who have recently given birth, or who are currently Breast feeding.

SECTION 9. CHEMICAL AND PHYSICAL PROPERTIES	
Density (g/cm ⁻³) at 20 ⁰ C	6 - 10 Approx.
Liquidus	130 ⁰ C - 310 ⁰ C
Colour and appearance	Grey metallic.
Physical state	Metallic wire, Solid at room temperature.
Solubility in Water	Insoluble
Odour	Mild

SECTION 10. STABILITY AND REACTIVITY	
Stability	Stable under all normal factory condition's.
Conditions to avoid	None known.
Materials to avoid	Solder will react with concentrated Nitric Acid to release Nitric Oxide which will oxidise to Nitrogen Dioxide. Workers exposed to these gasses should seek medical attention. Other strong acids may also react in a similar way. Flux will react with strong oxidising agents, with potentially explosive violence.
Hazardous Decomposition products	Molten liquid may give of fumes. Avoid temps. above 500 ⁰ C Heated Colophony gives rise to fumes associated with asthma.

SECTION 11. TOXICOLOGICAL INFORMATION	
Acute toxicity	Can lead to weakness, insomnia, hypertension, headaches and joint pains. Low order of acute toxicity.
Irritancy - Eyes	May cause conjunctival irritation, corneal damage, and iritis.
Irritancy - Skin	May cause skin irritation.
Reproductive and Developmental	Lead may cause developmental problems in a foetus.
Skin contact	Absorption through the skin is not significant.
Chronic Toxicity / Carcinogens	Damage in the blood – forming, nervous, urinary and reproductive systems. Lead is classified as a 2B carcinogen by the IARC (1987)
Human	Inhalation may cause sensitisation of the respiratory system.

SECTION 12. ENVIRONMENTAL INFORMATION	
Ecotoxicity	Rated as slightly toxic to Aquatic species.
Degradability and Persistence	Resistant to Bio-degradation.
Bio-accumulation	Has the potential to bio-accumulate.
Mobility	A small portion will dissolve in water, and will accumulate soil.

SECTION 13. DISPOSAL PROCEDURES	
Product disposal	Waste should be disposed under the "Special Waste" regulations. COPA 1980. Metal should be re-cycled if possible and disposed through your metal supplier if possible. Control of Pollution Act 1974, and the Environmental Protection Act 1990.
Container disposal	Containers must not be re-used. Dispose with care. See above.

SECTION 14. TRANSPORT PROCEDURES	
UN Number	Not Classified as hazardous for transport.
ADR/RID - Class	Not Classified as hazardous for transport.
IMDG - Class	Not Classified as hazardous for transport.
IMDG - Marine pollutant	No.
IATA - Class	Not Classified as hazardous for transport.

SECTION 15. REGULATORY INFORMATION	
Label Information	Health, Safety, Environment. Irritant.
Risk phrases	R20/21/22: R33/36/37/38: R42/R43:
Safety phrases	P2 warning. Contains Lead. P8 warning. Contains Colophony S23, S24, & S37.
EINECS Listing	Not listed.
EC Annex I classification	Xi - Irritant.
Applicable EC Directives	Dangerous Substances Directive 67/548/EEC and as amended by Directive 92/32/EEC. Dangerous Preparations Directive 88/379/EEC and as amended by Directive 90/492/EEC. Lead at work Directive 82/605/EEC.
Applicable UK Legislation	The Control of substances Hazardous to Health Regulations 1994. The Control of Lead at Work Act 1980. The Health and Safety at Work Act 1974 . The Management of Health and Safety at Work Regulations 1992. The Management of Health and Safety at Work Regulations 1994 as Amended.
Technical Guidance	An Introduction to Local Exhaust Ventilation HS(G)37: A Step by Step Guide to the COSHH Regulations HS(G)97:
This safety data sheet has been revise and re-written to comply with the Chemicals (Hazard Information & Packaging) Regulations 1993. Commission Directive 91/155/EEC.	

SECTION 16. OTHER INFORMATION
<p>The information contained in this document is based on data considered to be accurate at the time of publication and is given free of charge. It is representative of typical product but batches may exhibit minor variations. No warranty is expressed or implied concerning the accuracy of this data.</p> <p>In case of doubt or for clarification Almit Technology should be consulted. Almit are unable to anticipate all condition's under which the product may be used, and users are advised to carry out an assessment of workplace risk and carry out their own tests to determine the Safety and Suitability for the process and condition's of use.</p> <p>This information is intended for use in the United Kingdom only, as different limits may be set in other countries. Please check with your Local and National Authorities or Supplier.</p>

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