



<b>MATERIAL SAFETY DATA SHEET</b>	<b>ALMIT LEAD FREE SOLDER PASTE</b>
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<b>SECTION 1. PRODUCT AND COMPANY IDENTIFICATION</b>	
Trade Name	Almit Solder Paste. LFM 48 X TM-HP, LFM 48 W TM-HP
Tin / Silver / Copper Alloys	LFM 48
Manufacturer / Supplier	Almit Technology Ltd.
Address	Unit 7 Forest Row Business Park Station Road Forest Row East Sussex RH18 5DW
Phone Number ( United Kingdom )	01342 822 844
Fax Number ( United Kingdom )	01342 824 155

<b>SECTION 2. COMPOSITION AND INFORMATION ON THE INGREDIENTS</b>			
Preparation - Hazardous Components ( % w/w )			
Tin	Copper	Silver	Colophony
90.00- 100.00	Balance	0 –5.0	9 - 13 R42/43
Not Classified	Not Classified	Not Classified	Irritant

<b>SECTION 3. HAZARDS IDENTIFICATION</b>	
Main Hazards	Contact with the molten liquid will cause severe burns. Repeated Exposure may cause cumulative effects. Sensitisation by Skin Contact
Health Effects – Eyes	Molten liquid will cause severe burns and may result in blindness. Cream will cause conjunctival irritation and possible corneal damage.
Health Effects – Skin	Contact with the molten liquid will cause severe burns. Repeated or prolonged contact may cause Itching, Sensitisation, Soreness, Defatting of the skin and Dermatitis.
Health Effects – Ingestion	Contact with the molten liquid will cause severe burns. 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.
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.

<b>SECTION 4. FIRST AID MEASURES</b>	
Eye contact	Flood the eye immediately with copious amounts of cool fresh Water for 10 – 15mins. 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 reuse. 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.

<b>SECTION 5. FIRE FIGHTING MEASURES</b>	
Extinguishing media	Use an Alcohol resistant foam, Water spray, Dry chemical or Carbon Dioxide. Sand may be used for small fires.
Unsuitable Extinguishing media	<b>Do NOT use water jet.</b>
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.

<b>SECTION 6. ACCIDENTAL RELEASE MEASURES</b>	
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.

<b>SECTION 7. HANDLING AND STORAGE</b>	
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.

<b>SECTION 8. PERSONAL PROTECTION AND EXPOSURE CONTROL</b>	
National standards for Occupational Exposure	<b>See also Regulatory Information.</b>
Tin	UK EH40: OES 2mg/m <sup>3</sup> 8hr TWA.
Silver	UK EH40: OES, STEL 4mg/m <sup>3</sup> 15mins.
Copper	UK EH40: OES 0.1mg/m <sup>3</sup> 8hr TWA
Colophony	UK EH40: OES 1mg/m <sup>3</sup> 8hr TWA.
	UK EH40: OES, STEL 2mg/m <sup>3</sup> 15mins
	UK EH40: MEL 0.05mg/m <sup>3</sup> 8hr TWA
	UK EH40: MEL, STEL 0.15mg/m <sup>3</sup> 15mins
Engineering control procedures	Engineering solutions should be implemented to prevent or reduce Exposure to soldering fumes and dust. 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.
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.
<p><b><u>Biological Standards</u></b></p> <p>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.</p>	

<b>SECTION 9. CHEMICAL AND PHYSICAL PROPERTIES</b>	
Density ( g.cm <sup>-3</sup> ) at 20 <sup>0</sup> C	7.40 To 8.0 Approx.
Liquidus	220 <sup>0</sup> C
Colour and appearance	Grey metallic
Physical state	Metallic paste, Solid solder particles mixed with liquid flux
Solubility in Water	Insoluble
Odour	Mild

<b>SECTION 10. STABILITY AND REACTIVITY</b>	
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. Solder paste will react with strong oxidising agents, with Potentially explosive violence.
Hazardous Decomposition products	Molten liquid may give of fumes. Avoid temps. above 500 <sup>0</sup> C Heated Colophony gives rise to fumes associated with asthma.

<b>SECTION 11. TOXICOLOGICAL INFORMATION</b>	
Acute toxicity	Can lead to weakness, insomnia, hypertension, headaches and Joint pains. Low order of toxicity.
Irritancy – Eyes	May cause conjunctival irritation, corneal damage, and iritis.
Irritancy – Skin	May cause skin irritation.
Reproductive and Developmental	None known
Skin contact	Absorption through the skin is not significant.
Chronic Toxicity / Carcinogens	Damage in the blood - forming, nervous, urinary and reproductive Systems.
Human	Inhalation may cause sensitisation of the respiratory system.

<b>SECTION 12. ENVIRONMENTAL INFORMATION</b>	
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, will accumulate in soil.

<b>SECTION 13. DISPOSAL PROCEDURES</b>	
Product disposal	Waste should be disposed under the “Special Waste” regulations. COPA 1980. Metal should be recycled 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 reused. Dispose with care. See above.

<b>SECTION 14. TRANSPORT PROCEDURES</b>	
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	Not marked as a marine pollutant.
IATA – Class	Not Classified as hazardous for transport.

<b>SECTION 15. REGULATORY INFORMATION</b>	
Label Information	Health, Safety, Environment. Irritant.
Risk phrases	R36/37/38: R42: & R43:
Safety phrases	P8 warning contains Colophony S23: S24: S37: & S45:
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
Applicable UK Legislation	The Control of substances Hazardous to Health Regulations 1994 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 Chemical ( Hazard Information & Packaging for Supply ) Regulations CHIP 1997
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 rewritten to comply with the Chemicals ( Hazard Information & Packaging ) Regulations 1997. Commission Directive 91/155/EEC.	

<b>SECTION 16. OTHER INFORMATION</b>
<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.</p> <p>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>

**End**