

MATERIAL SAFETY DATA SHEET

Pb-Free Solder Wire

1. PRODUCT AND COMPANY IDENTIFICATION

Trade name: BT-19, GUMMIX SB RMA, KR-19SH RMA, SR-34Super, SR-34 SR-37, SR-38 RMA, SR-55/-LFM-86/-48/-41/-34/-22/-14/-S

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2. COMPOSITION AND INFORMATION ON THE INGREDIENTS

Name	CAS-Nr.	Content	Symbol	R-sätze
Tin	7440-31-5	0-100%	-	-
Copper	7440-50-8	0-100%	-	-
Rosin based flux	8050-09-7	2,0-10,0%	Xi	R-37; 42/43
Silver	7440-22-4	0-100%	-	-

3. HAZARDS IDENTIFICATION

Main Hazards	Contact with the molten liquid will cause severe burns. Repeated exposure may cause cumulative effects.
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.
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 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 Eye	Molten liquid will cause severe burns and may result in blindness.

4. FIRST AID MEASURES

Eye contact	Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.
Skin contact	Promptly flush contaminated skin with soap or mild detergent and water. Promptly remove clothing if penetrated and flush the skin with water. Contact physician if irritation continues.
Ingestion	Rinse nose, mouth and throat with water. Drink a few glasses of water or milk. Try to induce vomiting. Get medical attention.
Inhalation	Move the exposed person to fresh air at once.

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.

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.

7. HANDLING AND STORAGE

Handling	Avoid spilling, skin and eye contact. Eye wash station should be available at the work place. Provide good ventilation. Avoid inhalation of vapours. Persons susceptible to allergic reactions should not handle this product.
Storage	Store in a cool dry ventilated area in manufacturer's cartons. Ensure correctly labelled.

8. PERSONAL PROTECTION AND EXPOSURE CONTROL

Protective equipment



National standards for Occupational Exposure

See also Regulatory information

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 hand after handling with soap and warm water particularly before eating or drinking.

Eye and Facial protection

Wear approved chemical safety goggles where eye exposure is reasonably probable.

Body protection

Normal industrial workwear, avoid exposed skin. Protective footwear.

9. CHEMICAL AND PHYSICAL PROPERTIES

Appearance	Metallic wire with Flux.		
Colour	Grey		
Smell	Mild (or faint)		
Boiling point (°C, interval)	350	Pressure	760mm Hg
Melting-/Freezing point (°C, interval)	> 200 °C	Flux	> 60 °C
Density (g/ml)	6-10- g/cm ³	Temperature (°C)	20
Steam denseness (air =1)	7,4	Temperature (°C)	20
Steam pressure		Temperature (°C)	20
Solubility	Not soluble in water		
Flame point (°C)	Not applicably	Method	None known
Ignition temperature (°C)	Not applicably		

10. STABILITY AND REACTIVITY

Stability	Normally stable.
Conditions to avoid	Avoid contact with strong oxidizers.
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.
Hazardous Decomposition products	Could not polymerise. Molten liquid may give off fumes. Avoid temps. above 400 °C. Heated Colophony gives rise to fumes associated with asthma.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	Can lead to weakness, insomnia, hypertension, headaches and joint pains. Low order of toxicity.
Reproductive and Developmental	None known
Skin contact	Prolonged or repeated exposure could cause severe irritation. Could cause sensitization by skin contact.
Irritancy – Eyes	Irritant of eyes and mucous membranes.
Irritancy - Skin	May cause skin irritation
Human	Inhalation may cause sensitisation of the respiratory system.

12. ENVIRONMENTAL INFORMATION

Ecotoxicity	No data on possible environmental effects have been found.
Degradability and Persistence	The chemical is not readily biodegradable.
Mobility	Product is insoluble and inviolate.
Bio-accumulation	No bioaccumulation expected

13. DISPOSAL PROCEDURES

Disposal methods	Confirm disposal procedures with environmental engineer and local regulations.
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14. TRANSPORT PROCEDURES

Road transport: ADR	Not classified as hazardous for transport.
Transport by train: RID	Not classified as hazardous for transport.
Marine pollutant IMDG Class	Not classified as hazardous for transport.
Transport by air: IATA	Not classified as hazardous for transport

15. REGULATORY INFORMATION

Label Information



Harmful

Risk phrases	R-37 Irritating to respiratory system. R-43 May cause sensitization by skin contact.
Safety phrases	S-24 Avoid contact with skin. S-37 Wear suitable gloves.
Applicable E 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. Directive 70/1107/EEC Protection of Workers from risk related to exposure to Physical, Chemical and Biological agents at work. Administration Directive substances that are dangerous for water; VwVwS dated 17.05 1999..
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. As amended by Directive 93/112/EEC.	

16. OTHER INFORMATION

No warranty is expressed or implied concerning the accuracy of this data.

In case of doubt or for clarification Almit GmbH 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 conditions of use.