

1. Composition/Information of Ingredients

Ingredient Name	Cas No.	Contents (%)	Health (Class)	Risk (R. No.)
Lead Metal	7439-92-1	40.8	-	-
Rosin	8050-09-7	3.5	Xn	R42/43

2. Hazards Identification

Inhalation of the flux fumes given off at soldering temperatures will irritate the nose, throat and respiratory system. Exposure to flux fumes may cause an allergic reaction leading to occupational asthma. Flux fumes produced during soldering may irritate the skin and cause a rash to develop. Solder alloys containing Lead give off negligible lead fumes at normal soldering temperatures and at temperatures up to 500°C. Lead is harmful if absorbed into the body and can cause Lead poisoning, birth defects and other reproductive harm.

3. First AID Measures

Eyes - Flux fumes may irritate the eyes. The flux may spit during soldering operations - take care.

Inhalation - Flux fumes emitted during soldering will irritate the nose and throat and may cause an asthmatic type reaction.

Skin Contact - Rosin and rosin fumes produced on soldering may cause a rash to develop. Wash hands with soap and water after handling solder wire. If any skin irritation develops seek medical attention.

Ingestion - Not relevant.

4. Fire Fighting Measures

Extinguishing Media - Carbon dioxide, Dry powder, Halogenated Hydrocarbons, Sand, Foam.

Not To Be Used - Water.

Special Instructions To Fire Fighting Personnel Temperatures above 500°C may produce heavy metal dust, fumes and/or vapours. The flux will give rise to irritating fumes. Fire Fighters should wear full protective clothing and positive pressure breathing apparatus.

5. Accidental Release Measures

Not applicable.

6. Storage And Handling

The fumes produced during soldering should be extracted well away from the breathing zone of the operators. Avoid inhaling flux fumes. Ensure that the general area is well ventilated. Wash hands with soap and water after handling solder, particularly before eating, drinking or smoking. The product should be stored in a cool, dry area. Keep out of the reach of children and well away from food and drink.

7. Exposure Controls / Personal Protection

Ingredient Name	Cas No.	STD	LT Exp (8 Hrs)	ST Exp 10 (Min)
Lead	7439-92-1	-	0.15mg/m ³	-

Protective Equipment : Goggles / safety glasses provide eyewash station

8. Physical And Chemical Properties

Physical State	: Solid alloy.
Flash Point	: Not applicable
Solubility In Water	: Insoluble
Specific Gravity	: 8.5 GMs/cc
Lower explosion Limit	: Not applicable

9. Stability and Reactivity

If solder is exposed to temperatures above 500°C then Lead dust, fumes and/or vapour may be produced. Keep away from concentrated Nitric Acid - Solder will react with this to release toxic fumes of Nitric Oxide, which then oxidises to Nitrogen Dioxide, a red gas with a pungent odour. If personnel are exposed to these gases then immediate medical attention must be sought, as symptoms can be delayed for a considerable time and can be fatal.

10. Toxicological Information

Acute Toxicity

The flux fumes produced during soldering will irritate the nose, throat and respiratory system. For personnel who have become sensitised to rosin fumes, further exposure can cause symptoms of asthma (attacks of wheezing, chest tightness and breathlessness), alveoli is (breathlessness, and flu-like symptoms), or rhinitis and conjunctivitis (runny or stuffy nose and watery or prickly eyes typical of hay fever). Rosin can also cause sensitisation by skin contact, causing skin rash, weals and/or pustules to develop. Skin exposed to flux fumes may also be affected by irritation and rash.

Lead can cause weakness, pains in the joints, vomiting, loss of appetite and stupor.

Prolonged or repeated exposure to rosin flux fume may cause some workers to develop respiratory sensitisation. Cases of occupational asthma due to inhalation of rosin fumes produced from solder fluxes are reportable under The Reporting of Injuries, Diseases and Dangerous Occurrences Act 1995.

Chronic Toxicity

Lead can cause weakness, insomnia, headache and possible paralysis. Chronic overexposure to Lead may result in damage to the blood forming, nervous, urinary and reproductive systems. Lead is classified as a 2B carcinogen by the IARC (1987), i.e. evidence for carcinogenicity is adequate in animals but inadequate for humans. Severe Lead toxicity has long been known to cause sterility, abortion and neonatal mortality and morbidity.

11. Ecological Information

Lead is not degradable and will persist in the environment. Lead is insoluble in water and not attacked by most inorganic acids and alkalis.

12. Disposal Considerations

Wherever possible unwanted solder should be recycled for recovery of metal. Otherwise disposal should be in accordance with local and national legislation. In the UK this is the Control of Pollution Act 1974, the Environmental Protection Act 1990 and regulations made under them.

13. Transport Information

Solder wire is NOT classified as hazardous for transport.

14. Regulatory Information

Classification according to the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994:-

Flux cored solder wire is considered to be an article and is NOT subject to the above regulations. However, it is recommended that the following information is included on labels:-

Contains Lead which may harm your health. Lead can cause birth defects and other reproductive harm.

Regulations forbid the use of Lead containing solder in any private or public drinking water supply system.

Avoid breathing fumes given out during soldering. Flux fumes may irritate the nose, throat and lungs and may after prolonged/repeated exposure give an allergic reaction (asthma).

After handling solder wash hands with soap and water before eating, drinking or smoking.

Keep out of the reach of children.

Applicable EC Directives

Directive 82/605/EEC on the protection of workers from the risks related to the exposure to metallic Lead and its ionic compounds at work.

Directive 80/1107/EEC on the protection of workers from risks related to exposure to physical, chemical and biological agents at work.

Directive 92/85/EEC on the introduction of measures to encourage improvements to the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

Applicable UK Legislation

The Health & Safety at Work etc Act 1974

The Control of Lead at Work Regulations 1980

The Control of Substances Hazardous to Health Regulations 1994

The Management of Health & Safety at Work Regulations 1992

The Management of Health & Safety at Work (Amendment) Regulations 1994

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

15. Other Information

Further detailed guidance is available from the Health & Safety Executive.

The user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this Safety Data Sheet is based on the present state of knowledge and current national legislation.

It provides guidance only and should not be construed as a guarantee of technical performance or suitability for particular applications

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