

SAFETY DATA SHEET:

Thermic Lance Rods



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1. Identification of substance/mixture

1.1 Product identifier

Thermic lance rods.
Mini thermic lance rods.

1.2 Other means of identification

Thermic lance bars, thermic lances, thermal bars, burning bars, oxy lances, demolition rods.

1.3 Recommended use and restrictions on use

Thermic lance rods are used for cutting, boring and gouging operations, after ignition in a stream of oxygen gas.

1.4 Details of manufacturer/importer

**Australian Thermic Lance Company
a Division of K & R Ladle Co Pty Ltd**

46-48 Loftus St	Phone	02 9627 2835
Riverstone NSW 2765	Fax	02 9627 4158
Australia	Email	auslance@krl.com.au
	Int. phone	+61 2 9627 2835
	Int. fax	+61 2 9627 4158

1.5 Emergency phone number

Emergency phone number:	Phone	02 9627 2835
	Mobile	0412 683 983
	Int. phone	+61 2 9627 2835
	Int. mobile	+61 4 1268 3983

2. Hazards identification

2.1 GHS Classification

Not classified as a hazardous chemical according to the Globally Harmonised System of Classification and Labelling of Chemicals.

2.2 GHS Label elements, including precautionary statements

None.

2.3 Other hazards

A thermic lance consists of a mild steel tube containing a bundle of mixed wires. The ingredients are identical to those used in the construction industry. Inappropriate handling techniques may cause injuries. Safe use of a thermic lance requires training and strict adherence to the instructions given in "Thermic lancing made easy", available from the manufacturer.

3. Composition and information on ingredients

3.1 Substances

External tube

Mild steel: iron >99%, carbon 0.06-0.10%, phosphorus <0.03%, manganese <0.50%, silicon 0.14-0.24%, sulfur <0.03%
CAS number: 7439-89-6

Internal steel wires

Mild steel: iron >99%, carbon 0.06-0.10%, phosphorus <0.03%, manganese <0.50%, silicon 0.14-0.24%, sulfur <0.03%
CAS number: 7439-89-6

No components need to be disclosed according to the applicable regulations.

4. First aid measures

4.1 Description of necessary first aid measures

Inhalation and ingestion are not possible. Piercing injuries are possible to skin and eyes. Inappropriate manual handling techniques for bundles of rods may cause back injuries and other damage to body structure.

4.2 Symptoms caused by exposure

None.

4.3 Medical attention and special treatment

Treat wounds in conventional manner. There are no toxic chemicals to complicate treatment.

5. Fire fighting measures

5.1 Suitable extinguishing equipment

None required. Thermic lances can only be ignited if heated to a temperature in excess of 1000°C in pure oxygen gas.

5.2 Specific hazards arising from the substance/mixture

None.

5.3 Special protective equipment and precautions for fire fighters

None.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Gloves recommended to avoid cuts from sharp ends of tubes or wires.

6.2 Environmental precautions

None.

6.3 Methods and materials for containment and cleaning up

None.

7. Handling and storage

7.1 Precautions for safe handling

Gloves recommended to avoid cuts from sharp ends of tubes or wires.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry location, above the ground and away from sources of oil or grease. Leave end caps in place until immediately before use.

8. Exposure controls and personal protection

8.1 Exposure controls

Contains no substances with occupational exposure limit values.

8.2 Individual protection measures

Handle thermic lance rods with gloves to avoid cuts from any sharp edges.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Steel tube with steel wires inside
Odour:	Odourless
Odour threshold:	Not applicable
pH:	Not applicable
Melting point:	1400°C
Initial boiling point and boiling range:	2862°C; no data available on range
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability:	Not applicable
Explosive limits:	Not applicable
Vapour pressure:	Not applicable
Vapour density:	Not applicable
Relative density:	7.874 g cm ⁻³
Water solubility:	Insoluble
Partition coefficient, n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not applicable

9.2 Other safety information

Long tube (0.5 m to 3.25 m).
Heavy (0.3 kg to 10 kg)
Can be ignited if heated to a temperature in excess of 1000°C in pure oxygen gas.

Thermic lance rods have the same dangerous properties as pipes and tubes used in the building industry or in agriculture.

10. Stability and reactivity

10.1 Reactivity

Not reactive under recommended storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Strong oxidizing agents. Strong acids.

10.6 Hazardous decomposition products

Iron oxides slowly formed on surface under fire conditions.
No data available on other decomposition products.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Ingestion of thermic lance rods is not possible.
Particles of iron metal: LD50 Oral - Rat: 7500 mg/kg

Skin corrosion/irritation

No skin irritation.

Serious eye damage/eye irritation

No toxic effect.
Physical damage occurs if rod pierces eye.

Respiratory or skin sensitisation

Iron particles do not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Iron particles are not mutagenic in the Ames test (*S. typhimurium*).

Carcinogenicity

No component of thermic lance rods, present at levels greater than or equal to 0.1%, is identified as possible, probable or confirmed human carcinogen by IARC.

Reproductive toxicity

Iron particles did not show any teratogenic effects in animal experiments. Animal tests did not show any effects on fertility.

Specific target organ toxicity - single exposure

Iron particles are not classified as a specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

Iron particles are not classified as a specific target organ toxicant, repeated exposure.

Aspiration hazard

Aspiration of a thermic lance rod is not possible.

11.2 Information on possible routes of exposure

Exposure by skin contact.

11.3 Early onset symptoms related to exposure

No data available.

11.4 Delayed health effects from exposure

No data available.

12. Ecological information

12.1 Toxicity

Steel tube and wire oxidise in the environment in the presence of moisture to produce particles of hydrated iron(III) oxide (rust), which are not considered to be toxic to aquatic life.

12.2 Persistence and degradability

Steel tube and wire persists in the environment for many years, depending on the the availability of oxygen and moisture. The degradation product is hydrated iron(III) oxide (rust).

12.3 Bioaccumulation potential

Iron(III) compounds are not considered to bioaccumulate in the food chain.

12.4 Mobility in soil

No data available.

Iron metal may be converted to mobile iron(II) species under anoxic conditions in the presence of organic acids formed during incomplete decomposition of organic matter.

12.5 Other adverse effects

No data available.

13. Disposal considerations

13.1 Disposal containers and methods

Tie thermic lance rods together for transport.

Unused thermic lance rods should be recycled as scrap steel, if possible. Otherwise, rods may be sent to landfill.

13.2 Physical/chemical properties that may affect disposal options

No toxic chemicals leach from thermic lance rods.

13.3 Effects of sewage disposal

Do not dispose of rods to sewer, due to blockage of pipes.

13.4 Special precautions for incineration or landfill

Dispose of rods in a licenced landfill.

Incineration is impractical, due to the high temperature required.

14. Transport information

14.1 UN number

Not classified.

14.2 Proper shipping name or technical name

None.

14.3 Transport hazard class

Not classified as a hazardous chemical.

14.4 Packing group

None.

14.5 Environmental hazards for transport purposes

None.

14.6 Special precautions for user

None.

14.7 Additional information

None.

14.8 Hazchem or emergency action code

None specified in the ADG Code.

15. Regulatory information

15.1 Regulatory information not provided elsewhere

Thermic lance rods are not regulated under:
Montreal Protocol (Ozone Depleting Substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

15.2 Health, safety and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons

No Poisons Schedule number allocated.

Carcinogen classification under the Work Health and Safety Regulation

Not listed

16. Other information

The use of thermic lance rods for cutting, boring and gouging operations, after ignition in a stream of oxygen gas, may create a hazardous situation if safe work practices are not followed. The manufacturer's booklet "Thermic Lancing Made Easy" must be read, understood and all precautions rigorously followed.