

SAFETY DATA SHEET

Section 1. Identification of the material and supplier

Product Identifier:	LPP_K-714
Other means of identification:	Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S (Contains zinc powder stabilized) Product code: LPP_K-714
Recommended use of the chemical and restrictions on use:	Intermediate / additional components / Various chemical industry use application / Metal coatings.
Details of manufacturer or importer:	Titomic Limited Ground Floor, 365 Ferntree Gully Road, Mount Waverley, Victoria 3149, Australia
Telephone Number:	+61 3 9573 3188
Emergency Telephone number:	24 hours - +61 1800 951 288

Section 2: Hazards Identification

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; **DANGEROUS GOODS.**

Based on available information, classified as hazardous according to Safe Work Australia;
HAZARDOUS CHEMICAL.

Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)
Specific target organ toxicity – repeated exposure (Category 1)
Skin sensitisation (Category 1)
Carcinogenicity (Category 2)

Signal Word: Danger

Hazard Statements:

H317 May cause an allergic skin reaction
H351 Suspected of causing cancer
H372 Causes damage to organs (respiratory system, skin) prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention

- P202 Do not handle until all safety precautions have been read and understood
P260 Do not breath dust.
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection

Response

- P302+P352 IF ON SKIN: Wash with plenty of soap and water
P308+P313 IF exposed or concerned: Get medical advice/attention
P333+P313 IF skin irritation or rash occurs: Get medical advice/attention
P362+P364 Take off contaminated clothing and wash it before reuse
P391 Collect spillage

Storage

P403 + P235 Store in a well-ventilated place. Keep container tightly closed.

Keep material dry.

Other hazards

None

Hazard Symbols



Section 3. Composition and information on ingredients

Chemical Identity	Synonym	CAS Number	Proportions (%w/w)
Zinc powder (<i>stabilized</i>)	-	7440-66-6	13-17
Nickel powder	-	7440-02-0	48-52
Aluminium oxide (<i>White fused Alumina</i>)	-	1344-28-1	28-32

Section 4. First aid measures

In case of poisoning contact a doctor or Poisons Information Centre on 131 126, New Zealand 0800 764 766

Have the product label or SDS with you when calling or going for treatment.

Ingestion: If swallowed, drink water. Consult a doctor if feeling unwell.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Consult doctor if eye irritation persists.

Skin Contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If irritation persists, seek medical advice. Wash contaminated clothing before re-use.

Inhalation: After inhalation – provide fresh air. Consult doctor if feeling unwell.

Symptoms caused by exposure: Symptoms include inflammation of the mouth, throat and oesophagus, gastrointestinal discomfort and dyspnoea. Allergic reactions

Medical attention and special treatment: No data available

Section 5. Firefighting measures

Suitable extinguishing equipment:

Sand and other special powders for metal fires. Dry extinguishing powder.

Specific Hazards arising from the chemical:

Zinc/Nickel/Aluminium oxides fumes

Not combustible

Fine dust may produce combustible dust atmospheres. Dust explosion

Intense fire may liberate hazardous vapours

Special protective equipment and precautions for firefighters:

In the event of fire, wear self-contained breathing apparatus

Hazchem Code: 2x

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

Environmental precautions:

Do not let product enter drains. Cover drains and take up mechanically. Control dust

Methods and materials for containment and cleaning up:

Cover drains. Collect spillage. Observe possible material restrictions (see sections 7 and 10). Collect any dry spillage. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Section 7. Handling and storage

Precautions for safe handling:

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities:

Store in dry place. Keep containers tightly closed.

Section 8. Exposure controls and personal protection

Component	TWA 8h	TWA 5 days	STEL	Peak limitations (if available)
Zinc (Dust non-specific)	10 mg/m ³	Not available	Not available	Not available
Nickel metal powder	1 mg/m ³	Not available	Not available	Not available
Aluminium oxide	10 mg/m ³	Not available	Not available	Not available

No exposure standard assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituents(s) has been shown in table.

Note: As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as clear defining points between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Biological monitoring:

No biological limits allocated

Control banding:

No data available

Engineering controls:

Change contaminated clothing. Wash hands after working with substance.

Individual protection measures, for example personal protective equipment (PPE):

Eye and face protection

Wear safety glasses when handling this material

Skin protection

Avoid skin contact by wearing suitable work clothing

Respiratory protection

If work areas where dust generation is present where suitable respiratory protection

Thermal hazards

Not combustible

Other information.

Reference standards for (PPE).

Respiratory protection: AS/NZS 1715 and AS/NZS 1716.

Gloves: AS/NZS 2161.1.

Eye protection: AS/NZS 1336 and AS/NZS 1337

Section 9. Physical and chemical properties

Appearance	Silver grey odourless powder
Auto-ignition temperature:	Data is not available
Decomposition temperature:	Data is not available
Evaporation rate:	Data is not available
Flammability (solid, gas):	Data is not available
Flash point:	Data is not available
Initial boiling point and boiling range:	Data is not available
Melting point/freezing point	Data is not available
Odour:	Odourless
Odour threshold:	Data is not available
Partition coefficient: n-octanol/water:	Data is not available
pH:	Data is not available
Relative density:	Data is not available
Solubility:	Partly miscible in water
Upper/lower flammability or explosive limits:	Data is not available
Vapour density:	Data is not available
Vapour pressure:	Data is not available
Viscosity:	Solid

Biodurability or biopersistence:	Data is not available
Crystallinity:	Data is not available
Degree of aggregation or agglomeration and dispersibility:	Data is not available
Dustiness:	Data is not available
Particle size (average and range):	Data is not available
Redox potential:	Data is not available
Release of invisible flammable vapours and gases:	Data is not available
Saturated vapour concentration:	<i>(Include reference temperatures)</i>
Shape and aspect ratio:	Data is not available
Size distribution:	Data is not available
Specific heat value:	Data is not available
Surface area:	Data is not available
Surface coating or chemistry:	Data is not available

Section 10. Stability and reactivity

Reactivity:	Non-reactive in dry storage conditions
Chemical stability:	Data is not available
Possibility of hazardous reactions:	Will react with acids
Conditions to avoid:	Avoid storage in wet environments
Incompatible materials:	Acids
Hazardous decomposition products:	Material involve intense heat will evolve toxic and irritant vapours.

Section 11. Toxicological information

Information on possible routes of exposure:

Relevant values for classification

Chemical	LD ₅₀ (Oral)	LC ₅₀ (Inhalation)	LD ₅₀ (Dermal)
Zinc (powder stabilized)	>2000 mg/kg (Rat) (OECD Test 401)	>5.41 mg/l (4h) Rat (OECD, 2004)	No data available
Nickel metal powder	>9000 mg/kg (Rat)	No data available	No data available
Aluminium oxide	>2000 mg/kg (Rat)	>2.3 mg/l (4h) Rat	No data available

Acute Health Effects

Inhalation:

No data available

Skin:

Causes skin irritation, prolonged contact can cause dermatitis

Eye:

Causes eye irritation

Ingestion:

Ingestion of the material may be damaging to the health of the individual

Skin Corrosion / Irritation:

Causes skin irritation and material should not be allowed to enter the blood body stream via open skin cuts. Constant skin exposure may cause mild inflammation and repeated exposure can cause dermatitis.

Serious Eye Damage / Irritation:

Material can cause eye irritation. Direct eye contact should be avoided as symptoms such as discomfort characterised by tearing or conjunctival redness (similar to windburn). Slight abrasive damage may also result.

Respiratory or Skin Sensitisation:

Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity:

Based on classification principles, the classification criteria are not met.

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. (Note: The nickel component is a suspected carcinogen)

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:

May cause respiratory irritation.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria has been met.

Aspiration Hazard:

Based on classification principles, the classification criteria are not met.

Chronic Health Effects:

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure

Existing Conditions Aggravated by Exposure:

Pre-existing allergies, eye, skin and respiratory disorders.

Early onset of symptoms related to exposure:

No data available

Delayed health effects from exposure:

No data available

Exposure levels and health effects:

No data available

Interactive effects:

Health effects from exposure can be worsened by drinking alcohol, taking medication or smoking. Pre-existing medical conditions such as asthma, high blood pressure or a predisposition to allergic reactions may increase risk.

Other information:

No data available

Section 12. Ecological Information

Ecotoxicity:

Component	Toxicity to fish:	Toxicity to daphnia and other aquatic invertebrates:	Toxicity to bacteria:
Zinc (granules stabilised)	Moderately toxic to fish <i>Oncorhynchus mykiss</i> (rainbow trout): LC50 = 8.3 mg/l , 96 h	Slightly toxic to aquatic invertebrates <i>Daphnia magna</i> (Water flea), EC50 = 6 mg/l , 24 h	static test NOEC - <i>Pseudokirchneriella subcapitata</i> (green algae) - 0.05 mg/l - 3 d (OECD Test Guideline 201) static test NOEC - activated sludge - 0.1 mg/l - 4 h (ISO 9509) Remarks: (in analogy to similar products)
Nickel metal powder	No data available	No data available	No data available

Persistence and degradability: The methods for determining the biological degradability are not applicable to inorganic substances

Bioaccumulative potential: This substance is not considered to be persistent, bioaccumulating and toxic (PBT)

Mobility in soil: No data available

Other adverse effects: No information available (environmental fate, ozone depletion, photochemical ozone creation potential, endocrine-disruption potential and global warming potential.)

Section 13. Disposal consideration

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or incineration:

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible, material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional national and international Regulations.

Section 14. Transport Information

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail. (ADG Code).

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN Number	3077	3077	3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains zinc)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains zinc)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains zinc)
Transport hazard Class	9	9	9
Subsidiary Risk (s)	-	-	-

Packing Group number	III	III	III
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Marine pollutant: Yes
(IMDG)

Emergency Response Guide No: 171

Special precautions for user: Warning: Miscellaneous dangerous substances and articles

Hazchem Code: 2X
(ADG)

Additional information:

Prevent by any means available, spillage from entering drains and water course

Section 15. Regulatory information

This material is not subject to the following international agreements:

- 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).

This material/constituent(s) is covered by the following requirements:

- the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act 1989 (Cwlth) (as amended). **If so, list the relevant Poisons Schedule number.** A poison schedule number has not been allocated to this product
- All components of this product are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).
- All components of this product are listed on or exempt from the European Inventory of Existing Chemical Substances (EINECS)

Source of data

This SDS has been prepared in accordance with the Safe Work Australia Preparation of safety data sheets for hazardous chemicals Code of Practice, prepared under the Work Health and Safety Act and Work Health and Safety Regulations.

Code of Practice: Labelling of workplace hazardous chemicals
'Standard for the Uniform Scheduling of Medicines and Poisons

Hazard Classification

Australian Inventory of Chemical Substances (AICS) (NICNAS)
Chemical Assessment Reports (NICNAS)
Workplace Exposure Standards for Airborne Contaminants

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
(United Nations) Global Portal to Information on Chemical Substances (OECD).

OECD means the Organisation for Economic Cooperation and Development.

Hazardous Chemical Information System
European Chemicals Agency (ECHA)

Other references

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

IARC: International Agency for Research on Cancer.

Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.

Australian Emergency Response Guidebook

Section 16. Other Information

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Reason for issue: Revised & format update

Prepared by: ChemVit Consulting Pty Ltd. www.chemvit.com.au

Key abbreviations or acronyms used

<p>< Less Than. > Greater Than. AICS Australian Inventory of Chemical Substances. atm Atmosphere. CAS Chemical Abstracts Service (Registry Number). cm² Square Centimetres. deg C (°C) Degrees Celsius. CNS Central Nervous System EC No European Community number. g Grams g/cm³ Grams per Cubic Centimetre. g/l Grams per Litre. IDLH Immediately Dangerous to Life and Health. LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period, usually 1 or 4 hours. LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.</p>	<p>mg/m³ Milligrams per Cubic Metre NIOSH National Institute for Occupational Safety and Health. NOHSC National Occupational Health and Safety Commission. OECD Organisation for Economic Co-operation and Development. ppb Parts per Billion. ppm Parts per Million. psi Pounds per Square Inch. REACH Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. SWA Safe Work Australia. STEL Short Term Exposure Limit. TLV Threshold Limit Value. TWA Time Weighted Average. UN United Nations.</p>
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END OF SDS