

SAFETY DATA SHEET

According to Safe Work Australia

1 . IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: ZL-37 AEROSOL

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use: Fluorescent inspection penetrant

Details of Manufacturer or Importer:

Andrew Engineering Pty Ltd
86-90 Northern Road
West Heidelberg VIC 3081

Phone Number: +61 3 9457 0700

Emergency telephone number: National Poison Information Centre: 13 11 26

2 . HAZARDS IDENTIFICATION

Hazardous Nature:

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



flame

Flam. Aerosol 2 H223-H229 Flammable aerosol. Pressurised container: May burst if heated.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Signal Word Warning

Hazard Statements

H223-H229 Flammable aerosol. Pressurised container: May burst if heated.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

P211 Do not spray on an open flame or other ignition source.

P273 Avoid release to the environment.

P391 Collect spillage.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.




P501 Dispose of contents/container in accordance with local/regional/national regulations.

3 . COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

68476-86-8	Petroleum gases, liquefied, sweetened	15- 40%
	 Flam. Gas 1, H220;  Flam. Liq. 1, H224;  Press. Gas C, H280	
64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	10- 30%

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115-86-6	triphenyl phosphate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	1- 5%
8042-47-5	White mineral oil, petroleum ⚠ Asp. Tox. 1, H304	1- 5%
68131-39-5	Alcohols, C12-15, ethoxylated ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Flam. Liq. 4, H227	1- 5%
75-21-8	ethylene oxide ⚠ Flam. Gas 1, H220; Flam. Liq. 1, H224; ⚠ Press. Gas C, H280; ⚠ Acute Tox. 3, H331; ⚠ Muta. 1B, H340; Carc. 1B, H350; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	<0.1%
123-91-1	1,4-dioxane ⚠ Flam. Liq. 2, H225; ⚠ Carc. 2, H351; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	<0.1%
75-07-0	acetaldehyde ⚠ Flam. Liq. 1, H224; ⚠ Carc. 2, H351; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	<0.1%

Additional information:

Note K: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0.1% w/w 1,3 butadiene (EINECS no. 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the Safety Phrases (2-)9-16 should apply. This note applies to certain complex oil-derived substances in Annex I. (CAS No. 68476-86-8)

Note L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. This note only applies to certain complex oil-derived substances in Annex I. (CAS No. 64742-52-5).

4 . FIRST AID MEASURES

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

Skin Contact:

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: May cause respiratory irritation. Vapours formed on heating may cause drowsiness, dizziness and nausea.

Skin Contact: May cause skin irritation, redness, drying, defatting, cracking and oedema.

Eye Contact: May cause eye irritation, pain, redness, swelling and tearing.

Ingestion: May cause nausea, vomiting and chemical pneumonitis if aspirated into lungs.

5 . FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Foam or carbon dioxide. Do not use full water jet.

Specific Hazards Arising from the Chemical:

Hazardous combustion products include oxides of carbon and nitrogen.

Product is flammable. Vapours may travel considerable distances to a source of ignition where they can ignite, flashback, or explode.

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Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 . ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal.

7 . HANDLING AND STORAGE

Precautions for Safe Handling:

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.

Take precautionary measures against static discharge. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Protect from direct sunlight. Do not expose to temperatures exceeding 50 °C. Keep away from sources of ignition - no smoking. Do not spray on an open flame or other ignition source. Pressurized container. Do not pierce or burn, even after use. Container may explode if heated. Keep away from strong oxidising agents, strong acids and strong bases.

8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:

115-86-6 triphenyl phosphate

NES | TWA: 3 mg/m³

75-21-8 ethylene oxide

NES | TWA: 1.8 mg/m³, 1 ppm

123-91-1 1,4-dioxane

NES | TWA: 36 mg/m³, 10 ppm
Sk

75-07-0 acetaldehyde

NES | STEL: 91 mg/m³, 50 ppm
TWA: 36 mg/m³, 20 ppm

Engineering Controls:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the limits.

Respiratory Protection:

Use an approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for

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more information.

Skin Protection:

Chemical resistant gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 . PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Oily liquid
Colour:	Green
Odour:	Mild
Odour Threshold:	No information available
pH-Value:	Neutral
Melting point/Melting range:	No information available
Initial Boiling Point/Boiling Range:	235 °C
Flash Point:	No information available
Flammability:	Flammable.
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure at 21 °C:	0.133 hPa
Relative Density:	0.96
Vapour Density:	>1
Evaporation Rate:	Negligible
Solubility in Water:	Insoluble
Partition Coefficient (n-octanol/water):	No information available
Viscosity at 40 °C:	13.32- 16.28 cSt

10 . STABILITY AND REACTIVITY

Possibility of Hazardous Reactions: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: Heat, sparks, open flames and other sources of ignition.

Incompatible Materials: Strong oxidising agents, strong acids and strong bases.

Hazardous Decomposition Products: Oxides of carbon and nitrogen oxides.

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11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

8042-47-5 White mineral oil, petroleum

Oral	LD ₅₀	>5000 mg/kg (rat)
Dermal	LD ₅₀	>2000 mg/kg (rabbit)
Inhalation	LC ₅₀ /4 h	>5 mg/L (rat)

29761-21-5 Phosphoric acid, isodecyl diphenyl ester

Oral	LD ₅₀	>15800 mg/kg (rat)
Dermal	LD ₅₀	>7900 mg/kg (rabbit)
Inhalation	LC ₅₀ /4 h	>6.3 mg/L (rat)

64742-52-5 Distillates (petroleum), hydrotreated heavy naphthenic

Oral	LD ₅₀	>5000 mg/kg (rat)
Dermal	LD ₅₀	>5000 mg/kg (rabbit)
Inhalation	LC ₅₀ /4 h	>5.0 mg/L (rat)

68131-39-5 Alcohols, C12-15, ethoxylated

Oral	LD ₅₀	>5000 mg/kg (rat)
Dermal	LD ₅₀	2500 mg/kg (rabbit)

115-86-6 triphenyl phosphate

Oral	LD ₅₀	3500 mg/kg (rat)
Dermal	LD ₅₀	>7900 mg/kg (rabbit)

75-21-8 ethylene oxide

Oral	LD ₅₀	72 mg/kg (rat)
Inhalation	LC ₅₀ /4 h	2671 mg/L (rat) 800 ppm (rat)

123-91-1 1,4-dioxane

Oral	LD ₅₀	4200 mg/kg (rat) 5700 mg/kg (mouse)
Dermal	LD ₅₀	7600 mg/kg (rabbit)
Inhalation	LC ₅₀ /4 h	48.5 mg/L (rat)

75-07-0 acetaldehyde

Oral	LD ₅₀	1930 mg/kg (rat)
Inhalation	LC ₅₀ /4 h	13300 ppm (rat) 37 mg/L (rat)

68476-86-8 Petroleum gases, liquefied, sweetened

Inhalation	LC ₅₀ /4 h	658 mg/L (rat)
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Acute Health Effects

Inhalation:

May cause respiratory irritation. Vapours formed on heating may cause drowsiness, dizziness and nausea.

Skin: May cause skin irritation, redness, drying, defatting, cracking and oedema.

Eye: May cause serious eye irritation, pain, redness, swelling and tearing.

Ingestion: May cause nausea, vomiting and chemical pneumonitis if aspirated into lungs.

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Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Based on classification principles, the classification criteria are not met.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Ethylene oxide is classified by Safe Work Australia as Mutagen Category 2.

Carcinogenicity:

Ethylene oxide is classified by IARC as Group 1 - Carcinogenic to humans.

1, 4-Dioxane and acetaldehyde are classified by IARC as Group 2B - Possibly carcinogenic to humans.

Ethylene oxide is classified by Safe Work Australia as Carcinogen Category 2.

1,4-Dioxane and acetaldehyde are classified by Safe Work Australia as Carcinogen Category 3.

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

Specific Target Organ Toxicity (STOT) - Single Exposure:

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

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

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

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: No information available

Existing Conditions Aggravated by Exposure: No information available

12 . ECOLOGICAL INFORMATION

Ecotoxicity: No information available

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulative Potential: No information available

Mobility in Soil: No information available

Other adverse effects: No information available

13 . DISPOSAL CONSIDERATIONS

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

Special Precautions for Landfill or Incineration:

Please consult your state Land Waste Management Authority for more information.

14 . TRANSPORT INFORMATION

UN Number	
ADG, IMDG, IATA	1950
Proper Shipping Name	
ADG, IMDG, IATA	AEROSOLS
Dangerous Goods Class	
ADG Class:	2.1
Packing Group:	Not applicable
Marine pollutant:	Yes
	Symbol (fish and tree)

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EMS Number: F-D,S-U
Hazchem Code: 2YE
Special Provisions: 63, 190, 277, 327
Packagings & IBCs - Packing Instruction: P003, LP02
Packagings & IBCs - Special Packing Provisions: PP17, PP87, L2
Portable Tanks & Bulk Containers - Instructions: No information available
Portable Tanks & Bulk Containers - Special Provisions: No information available

15 . REGULATORY INFORMATION

Australian Inventory of Chemical Substances:

29761-21-5	Phosphoric acid, isodecyl diphenyl ester
68476-86-8	Petroleum gases, liquefied, sweetened
64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic
115-86-6	triphenyl phosphate
8042-47-5	White mineral oil, petroleum
68131-39-5	Alcohols, C12-15, ethoxylated
75-21-8	ethylene oxide
123-91-1	1,4-dioxane
75-07-0	acetaldehyde

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 7

16 . OTHER INFORMATION

Date of Preparation or Last Revision: 28.08.2015

Prepared by: MSDS.COM.AU Pty Ltd

www.msds.com.au

Abbreviations and acronyms:

ADG: Australian Dangerous Goods
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC₅₀: Lethal concentration, 50 percent
LD₅₀: Lethal dose, 50 percent
IARC: International Agency for Research on Cancer
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011"

The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Andrew Engineering Pty Ltd makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. MSDS.COM.AU Pty Ltd is not in a position to warrant the accuracy of the data herein. The user is cautioned to make their own

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determinations as to the suitability of the information provided to the particular circumstances in which the product is used.