

LACTANOL AMS

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ISSUED by: Axieo Operations (New Zealand)
Limited

1. IDENTIFICATION

GHS Product Identifier

LACTANOL AMS

Product Code

AANH10002

Company Name

Axieo Operations (New Zealand) Limited

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NEW ZEALAND**Telephone/Fax Number**

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Emergency phone number

0800 154 666

E-mail Address

compliance@axieo.com

Recommended use of the chemical and restrictions on use

Used in manufacture of chemicals, lacquer thinners, industrial and domestic cleaners, solvents, and antifreeze.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

3.1B Flammable liquid: high hazard

6.1E (Oral) - Substance that is acutely toxic

6.4A Substance that is irritating to the eyes

6.8B Substance that is suspected to be a human reproductive or developmental toxicant

6.8C Substance that produces toxic human reproductive or developmental effects on or via lactation

6.9A (Repeated exposure) - Substance that is toxic to human target organs or systems

Signal Word (s)

DANGER

Hazard Statement (s)

H225 Highly flammable liquid and vapour.

H303 May be harmful if swallowed.

H319 Causes serious eye irritation.

H361 Suspected of damaging fertility or the unborn child.

H362 May cause harm to breast-fed children.

H372 Causes damage to organs through prolonged or repeated exposure.

Pictogram (s)

Flame,Health hazard,Exclamation mark



Precautionary statement – Prevention

- P102 Keep out of reach of children.
- P103 Read label before use.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P263 Avoid contact during pregnancy/while nursing.
- P264 Wash contaminated skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response

- P101 If medical advice is needed, have product container or label at hand.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P370+P378 In case of fire: Use carbon dioxide, dry chemical, foam, water spray, sand or dolomite for extinction.

Precautionary statement – Storage

- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Precautionary statement – Disposal

P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Ethanol	64-17-5	>=96 %
Water	7732-18-5	<=4 %
Methanol	67-56-1	<=2 %

4. FIRST-AID MEASURES

Inhalation

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre or a doctor at once. (0800 764 766)

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray, foam, dry chemical, carbon dioxide, sand or dolomite. Alcohol resistant foam is preferred. If not available fine water spray/mist can be used.

DO NOT extinguish fire unless flow can be stopped first.

Unsuitable Extinguishing Media

Do not use water jet.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes and gases including oxides of nitrogen, carbon monoxide and carbon dioxide.

Specific Hazards Arising From The Chemical

Highly flammable liquid and vapour. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard.

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations.

If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear appropriate personal protective equipment and clothing to prevent exposure. Handle and use the material in a well-ventilated area, away from sparks, flames and other ignition sources. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Work from suitable, labelled, fire-resistant containers. Open containers carefully as they may be under pressure. Keep containers tightly closed. Flameproof equipment is necessary in areas where the product is being used. Take precautionary measures against static discharges. Earth or bond all equipment. Do not empty into drains. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet facilities.

Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids.

Unsuitable Materials

Aluminium is not a suitable container for storage. Ground the container and transfer equipment to eliminate static electric sparks. Keep containers closed at all times – check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

Substance	Regulations	Exposure Duration	Exposure Limit	Units	Notes
Methanol	NZ OELs List	TWA	200	ppm	skin
Methanol	NZ OELs List	TWA	262	mg/m ³	skin
Methanol	NZ OELs List	STEL	250	ppm	skin
Methanol	NZ OELs List	STEL	328	mg/m ³	skin
Ethanol	NZ OELs List	TWA	1000	ppm	
Ethanol	NZ OELs List	TWA	1880	mg/m ³	

Biological Limit Values

Name: Methanol

Determinant: methanol in urine

Bei®: 15 mg/g

Sampling time: End of shift.

Source: American Conference of Industrial Hygienists (ACGIH)

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1:2009 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material such as nitrile rubber, PVC, butyl rubber. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Liquid

Appearance

Clear, colourless liquid

Colour

Colourless

Odour

Characteristic

Decomposition Temperature

Not available

Melting Point

-112.3°C

Freezing Point

-114.1°C

Boiling Point

78.32°C

Solubility in Water

Miscible

Solubility in Organic Solvents

Miscible with methanol, ether, chloroform, acetone

Specific Gravity

0.7904 (20°C)

pH

Neutral

Vapour Pressure

5.9kPa (20°C)

Vapour Density (Air=1)

1.59

Evaporation Rate

2.4 (n-Butyl acetate=1)

Odour Threshold

Not available

Viscosity

Refer to Section 9: Kinematic Viscosity and Dynamic Viscosity

Volatile Component

100%

Partition Coefficient: n-octanol/water

-0.3

Flash Point

13°C (Closed Cup)

Flammability

Highly flammable

Auto-Ignition Temperature

363°C (approximate)

Flammable Limits - Lower

3.3%v/v

Flammable Limits - Upper

19.0%v/v

Explosion Properties

Moderate/severe in a confined space in the presence of a source of ignition.

Molecular Weight

46.07

Oxidising Properties

Oxidizing Agents:

It can react vigorously with these -

Acids:

Concentrated nitric acid - violent reaction.

Sulphuric acids - the mixture may become warm.

Other acids - no dangerous reaction.

Alkalis:

No dangerous reaction.

Kinematic Viscosity

Not available

Dynamic Viscosity

1.08cP (25°C)

1.2mPa.s (20°C)

Other Information

Chemical Family: Alcohol (primary aliphatic)

Formula: C₂H₅OH

Is hygroscopic and a stable compound

Coefficient of Cubic Expansion: 0.0011/°C

10. STABILITY AND REACTIVITY

Reactivity

Refer to Section 10: Possibility of hazardous reactions

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Heat, open flames and other sources of ignition.

Aluminium containers should be avoided as aluminium alcoholates may be formed under certain conditions. Ethanol is Hygroscopic.

Incompatible materials

Strong oxidising agents.

Methylated Spirits is incompatible with oxidising agents, alkali metals, acids, acid chlorides, ammonia and potassium tert-butoxide.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes including: carbon dioxide and carbon monoxide.

Possibility of hazardous reactions

Reacts with incompatible materials.

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

Available toxicity data is given below.

Acute Toxicity - Oral

Ethanol

LD50 (rat): 7060mg/kg

Acute Toxicity - Inhalation

Ethanol

(LC50 (rat): 20,000ppm/10hr

A study of the effects of ethanol inhalation in humans, found that between 5000-10,000ppm subjects experience coughing and smarting of the eyes and nose, with the symptoms disappearing within minutes. People exposed at 15,000ppm experienced continuous lacrimation and coughing.

Irritation of the eyes and respiratory tract were not noted at concentrations below 5000ppm.

Ingestion

May be harmful if swallowed. Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation

Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Skin

May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye

Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Ethanol typically inactive in genotoxic assays, but on some occasions, a weak response has been noted.

Carcinogenicity

Not considered to be a carcinogenic hazard.

There is no clear evidence that ethanol is carcinogenic to laboratory animals; it is however a tumour promoter.

Reproductive Toxicity

Suspected of damaging fertility or the unborn child. Classified as a suspected human reproductive or developmental toxicant. May cause harm to breast-fed children. Classified as a substance that produces toxic human reproductive or developmental effects on or via lactation.

Oral exposure to ethanol produces malformations and developmental toxicity in rats and mice at maternally toxic doses. No developmental effects were observed in rats from inhalation at doses up to 20,000ppm.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Long Term Effects:

Ethanol

Evidence from animal tests and studies on exposed humans indicate that repeated or prolonged exposure to this chemical by inhalation or ingestion could result in liver damage.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

Estimated fatal dose (human): 300-400ml of pure ethanol

12. ECOLOGICAL INFORMATION

Ecotoxicity

The available ecological data is given below.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Methylated Spirits has a low potential for bioaccumulation and is substantially biodegradable in water.

Other Adverse Effects

Not available

Environmental Protection

Do not discharge this material into waterways, drains and sewers.

Acute Toxicity - Fish

LC50 (rainbow trout): 11,200mg/l/24h (flow through)

13. DISPOSAL CONSIDERATIONS

Disposal considerations

Dispose of waste according to applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near containers. Empty containers may contain flammable residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers. Advise flammable nature.

Product Disposal:

Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. In this specific case the product is a flammable substance and therefore can be sent to an approved high temperature incineration plant for disposal. Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed. Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected. In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

Container Disposal:

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service. Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous. In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

14. TRANSPORT INFORMATION

Transport Information

This product is classified as Dangerous Goods Class 3 Flammable Liquids

Must not be loaded in the same freight container or on the same vehicle with:

Class 1: Explosives

Division 2.1: Flammable gases

Division 2.3: Toxic gases

Division 4.2: Spontaneously combustible substances

Division 5.1: Oxidising substances

Division 5.2: Organic peroxides

Class 7: Radioactive materials unless specifically exempted

Must not be loaded in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:

Division 4.3: Dangerous when wet substances

Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:

Division 4.2: Spontaneously combustible substances

Division 4.3: Dangerous when wet substances

Division 5.1: Oxidising substances

Division 5.2: Organic peroxides

U.N. Number

1170

UN proper shipping name

ETHANOL SOLUTION

Transport hazard class(es)

3

Packing Group

II

Hazchem Code

•2YE

UN Number (Air Transport, ICAO)

1170

IATA/ICAO Proper Shipping Name

ETHANOL SOLUTION

IATA/ICAO Hazard Class

3

IATA/ICAO Packing Group

II

IATA/ICAO Symbol

Flammable Liquid

IMDG UN No

1170

IMDG Proper Shipping Name

ETHANOL SOLUTION

IMDG Hazard Class

3

IMDG Pack. Group

II

IMDG Marine pollutant

No

IMDG EMS

F-E,S-D

Transport in Bulk

Not available

Special Precautions for User

Not available

15. REGULATORY INFORMATION

Regulatory information

Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Group Standard: Denatured Ethanol Group Standard 2006.

HSNO Approval Number

HSR002553

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS Reviewed: April 2016, Supersedes: November 2015

References

Workplace Exposure Standards and Biological Exposure Indices.

Transport of Dangerous goods on land NZS 5433.

Preparation of Safety Data Sheets - Approved Code of Practice Under the HSNO Act 1996 (HSNO CoP 8-1 09-06).

Assigning a hazardous substance to a group standard.

American Conference of Industrial Hygienists (ACGIH)

Contact Person/Point

IMPORTANT ADVICE: An SDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. The information contained in this SDS is believed to be correct but is not guaranteed. Prior to using the product(s) referred to in this SDS, each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace, including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact the supplier listed in section 1 of the SDS. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request. Axieo does not accept any other liability either directly or indirectly for any losses suffered in connection with the use and application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

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END OF SDS

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