



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE SUPPLIER

Product:	LUCILURE A
Chemical Group:	Sodium sulphide solution
Recommended Use:	Blowfly attractant
Company:	Bioglobal Limited
Address:	12 Electronics Street, Eight Mile Plains QLD 4113
Customer Service Tel/Fax:	+61 (0)7 3340 9999/ +61 (0)7 3340 9900
Email:	enquiries@bioglobal.com.au
Website:	www.bioglobal.com.au
\Emergency Numbers (Australia):	000 – Emergency Call Service (Fire, Ambulance, Police) 13 11 26 – National Poisons Information Centre
Emergency Numbers (NZ):	111 – Transport Emergencies Phone (Fire, Ambulance, Police) 0800 CHEMCALL (0800 243 622) – 24hr Emergencies Only 0800 POISON (0800 764 766) – National Poisons Information Centre

2. HAZARDS IDENTIFICATION

Dangerous goods:

Dangerous goods class:	8 and subsidiary risk
Hazchem code:	2X
ERMA New Zealand Approval Code:	HSR100093

HSNO Hazard Classification:

- 6.1C:** Harmful to skin. Causes skin burns. May be absorbed through skin in toxic amounts.
8.2B: 8.3A: Causes burns. Risk of serious damage to eyes.
9.1A : Toxic to aquatic life.

3. COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Entity	CAS Number	Proportion
Sodium sulphide	1313-82-2	12%

The above liquid is enclosed in a 90 ml polyethylene wick bottle.

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126, New Zealand 03 4747000.

Swallowed:	Give water or milk to dilute and induce vomiting immediately. Never give anything to an unconscious person. Seek medical attention.
Eye:	Do NOT allow victim to rub or keep eyes closed. Rinse eyes with water for at least 15 minutes. Seek medical advice if irritation develops.
Skin:	Wash immediately with soap and water. Remove contaminated clothes. Get Medical Advice if irritation develops. Wash clothes in water before reuse.
Inhaled:	Remove to fresh air.

5. FIRE FIGHTING MEASURES

Fire:	Not considered to be a fire hazard. LuciLure A wick bottles consist predominantly of polyethylene containing sodium sulphide solution and will not burn with a smoky flame.
Explosion:	Not considered to be an explosion hazard.
Fire Extinguishing Media:	Use whatever media are suitable for extinguishing the surrounding fire.
Protective Clothing:	Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Sodium sulphide solution in LuciLure A is present in small quantities and as such presents no significant environmental hazard. It is biodegradable and water soluble and can be hosed away or absorbed with dry sand or earth.

7. HANDLING AND STORAGE:

Handling:	When opening the container and using the product, wear appropriate protective clothing (see section 8 below). Solution should be handled as a potential health hazard, similar to sodium hydroxide (caustic soda) solution.
Storage:	Store in a cool, dry, dark, ventilated Area. Protect from physical damage.



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8. EXPOSURE CONTROLS & PERSONAL PROTECTIVE EQUIPMENT

Exposure standards:	Not established.
Engineering controls:	Open container in the open air. If opening in an enclosed area, a system of local or general exhaust is recommended to keep employee exposure as low as possible.
Personal protection:	When opening the container and using the product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemically-resistant rubber gloves, goggles, and a disposable mask. Avoid inhaling vapour. Wear chemical protective eye-wear if loaded wick bottles are to be taken apart. After each days use, wash gloves, goggles and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellowish sulphurous smelling liquid, in wick bottle
Boiling point/melting point:	> 100°C
Specific gravity:	> 1.2
Flashpoint (°C):	Not applicable
Auto ignition temperature:	Not applicable
Flammability limits (%):	Not applicable
Solubility in water:	Soluble
Other properties:	Strongly alkaline, reacts with acids to release toxic hydrogen sulphide.

10. STABILITY AND REACTIVITY

Stability:	The product is stable at ambient temperatures.
Conditions to avoid:	Contact with acids.
Material to avoid:	Acids
Decomposition products:	Sodium sulphide reacts with acids to release poisonous hydrogen sulphide gas.
Polymerisation:	No hazardous polymerisation is known to occur

11. TOXICOLOGICAL INFORMATION

Health Effects

Lucilure A is not expected to result in any health effects if used and handled as directed on the product label and in this MSDS. Should mishandling result in over-exposure, symptoms that might occur are:

Acute

Swallowed:	Harmful if swallowed. May cause severe and permanent damage to digestive tract. Causes immediate pain, swelling of the throat, convulsions and possible coma. May cause dizziness, drowsiness, confusion, weakness, irregular breathing and unconsciousness. Contact with stomach acids can liberate toxic hydrogen sulphide.
Eye:	May cause permanent damage to eyes and irreversible eye damage. May cause corneal damage.
Skin:	Causes skin burns. May be absorbed through skin in toxic amounts.
Inhaled:	No inhalation toxicity in mammal studies.

Chronic

No chronic toxicity studies are available.

12. ECOLOGICAL INFORMATION

The active constituent sodium sulphide is toxic to aquatic animals, HSNO class 9.1A. However this possibility is unlikely in view of the very small quantity in the bottle.

13. DISPOSAL CONSIDERATIONS

Disposal Information:	Dispose of empty bottles by recapping, wrapping in paper and putting in garbage or burying below 500 mm with original packaging. Dispose of outer container at a local authority landfill or if not available, by burying below 500 mm in a disposal pit specifically marked and set up for this purpose clear of water ways, desirable vegetation and tree roots. Empty containers and product should not be burned.
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14. TRANSPORT INFORMATION

Shipping Name:	Not regulated
Hazard Class:	Not applicable
UN Number:	Not applicable

15. REGULATORY INFORMATION

ERMA New Zealand Approval Code: HSR100093.
Lucilure A is a component of Lucilure Sheep Blowfly Attractant, which is registered with the Australian Pesticides and



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Veterinary Medicines Authority as per APVMA Approval Number 51198.

16. OTHER INFORMATION

This MSDS summarises 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. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including 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 this company.

END OF MSDS



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE SUPPLIER

Product: **LUCILURE B**
 Chemical Group: Mercaptoethanol, thioglycol, 2-hydroxyethyl mercaptan
 Recommended Use: Blowfly attractant
 Company: Bioglobal Limited
 Address: 12 Electronics Street, Eight Mile Plains QLD 4113
 Customer Service Tel/Fax: +61 (0)7 3340 9999/ +61 (0)7 3340 9900
 Email: enquiries@bioglobal.com.au
 Website: www.bioglobal.com.au

Emergency Numbers (Australia): 000 – Emergency Call Service (Fire, Ambulance, Police)
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 0800 CHEMCALL (0800 243 622) – 24hr Emergencies Only
 0800 POISON (0800 764 766) – National Poisons Information Centre

2. HAZARDS IDENTIFICATION

Dangerous goods:

Dangerous goods class: 6 and subsidiary risk
 Hazchem code: 2X
 ERMA New Zealand Approval Code: HSR007328

HSNO Hazard Classification:

3.1D Flammable
6.1B Toxic if swallowed, inhaled or in contact with skin
6.3A, 6.5B Irritating to skin, may cause skin sensitisation
8.3A Can cause serious eye damage
9.1A Toxic to aquatic organisms
9.2D May be harmful to soil organisms
9.3B Ecotoxic to terrestrial vertebrates

3. COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Entity	CAS Number	Proportion
2-Mercaptoethanol	60-24-2	95%
1-H Indole	120-72-9	5%

The above liquid is enclosed in a 60 ml polyethylene wick bottle.

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126, New Zealand 03 4747000.

Swallowed: Rinse mouth immediately, if conscious immediately induce vomiting. Seek medical attention.
 Eye: Rinse eyes with water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek medical advice.
 Skin: Wash immediately with soap and water. Remove contaminated clothes. Get Medical Advice if irritation develops. Wash clothes in water before reuse.
 Inhaled: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Fire: Mercaptoethanol is not highly inflammable but can be ignited when in contact with a naked flame. When ignited, Mercaptoethanol may release vapourized mercaptoethanol, carbon monoxide and sulfur oxides.
 Explosion: Not considered to be an explosion hazard.
 Fire Extinguishing Media: Use a water spray or a dry, foam or carbon dioxide fire extinguisher.
 Protective Clothing: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

The mercaptoethanol in LuciLure B is present in small quantities and as such presents no significant environmental hazard. Spills arising from LuciLure B may be denatured using household bleach (chlorox or similar). It is biodegradable and water soluble and can be hosed away.

7. HANDLING AND STORAGE:



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Handling:	Directions for safe handling: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. When opening the container and using the product, wear appropriate protective clothing (see section 8 below).
Storage:	Keep container closed. Keep away from heat and open flame. Store in a cool, dry, dark, ventilated Area. Protect from physical damage.

8. EXPOSURE CONTROLS & PERSONAL PROTECTIVE EQUIPMENT

Exposure standards:	Not established.
Engineering controls:	Open container in the open air. If opening in an enclosed area, a system of local or general exhaust is recommended to keep employee exposure as low as possible.
Personal protection:	When opening the container and using the product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemically-resistant rubber gloves (nitrile), goggles, and a disposable mask. Avoid inhaling vapour. Wear chemical protective eye-wear if loaded wick bottles are to be taken apart. After each day's use, wash gloves, goggles and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, yellow-brown, foul smelling liquid, in wick bottle
Boiling point/melting point:	149–161°C
Specific gravity:	1.12
Flashpoint (°C):	68.3°C
Auto ignition temperature:	440°C
Flammability limits (%):	Not applicable
Solubility in water:	Soluble
Other properties:	None relevant

10. STABILITY AND REACTIVITY

Stability:	The product is stable at ambient temperatures.
Conditions to avoid:	Sensitive to moisture. Heat.
Material to avoid:	Oxidizing agents Avoid contact with metals.
Decomposition products:	Hazardous products are Sulfur oxides Carbon monoxide, Carbon dioxide.
Polymerisation:	Hazardous polymerisation will not occur

11. TOXICOLOGICAL INFORMATION

Health Effects

LuciLure B is not expected to result in any health effects if used and handled as directed on the product label and in this MSDS. Should mishandling result in over-exposure, symptoms that might occur are:

Acute

Swallowed:	Harmful if swallowed. May cause severe and permanent damage to digestive tract. Causes immediate pain, swelling of the throat, convulsions and possible coma. May cause dizziness, drowsiness, confusion, weakness, irregular breathing and unconsciousness. Contact with stomach acids can liberate toxic hydrogen sulfide.
Eye:	May cause permanent damage to eyes and irreversible eye damage. May cause corneal damage.
Skin:	Causes skin burns. May be absorbed through skin in toxic amounts.
Inhaled:	No inhalation toxicity in mammal studies.

Chronic

No chronic toxicity studies are available.

12. ECOLOGICAL INFORMATION

The active constituent sodium sulfide is toxic to aquatic animals, HSNO class 9.1A. However this possibility is unlikely in view of the very small quantity in the bottle.

13. DISPOSAL CONSIDERATIONS

Disposal Information:	Dispose of empty bottles by recapping, wrapping in paper and putting in garbage or burying below 500 mm with original packaging. Dispose of outer container at a local authority landfill or if not available, by burying below 500 mm in a disposal pit specifically marked and set up for this purpose clear of water ways, desirable vegetation and tree roots. Empty containers and product should not be burned.
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14. TRANSPORT INFORMATION

Shipping Name:	Not regulated
Hazard Class:	Not applicable
UN Number:	Not applicable

15. REGULATORY INFORMATION

ERMA New Zealand Approval Code: HSR00328 and HSR003479.
LuciLure B is a component of Lucilure Sheep Blowfly Attractant, which is registered with the Australian Pesticides and Veterinary Medicines Authority, APVMA Approval Number 51198.

16. OTHER INFORMATION

This MSDS summarises 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. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including 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 this company.

END OF MSDS



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE SUPPLIER

Product:	LUCILURE C
Chemical Group:	Butanoic acid, butyric acid, ethyl acetic acid, propylformic acid
Recommended Use:	Blowfly attractant
Company:	Bioglobal Limited
Address:	12 Electronics Street, Eight Mile Plains QLD 4113
Customer Service Tel/Fax:	+61 (0)7 3340 9999/ +61 (0)7 3340 9900
Email:	enquiries@bioglobal.com.au
Website:	www.bioglobal.com.au
Emergency Numbers (Australia):	000 – Emergency Call Service (Fire, Ambulance, Police) 13 11 26 – National Poisons Information Centre
Emergency Numbers (NZ):	111 – Transport Emergencies Phone (Fire, Ambulance, Police) 0800 CHEMCALL (0800 243 622) – 24hr Emergencies Only 0800 POISON (0800 764 766) – National Poisons Information Centre

2. HAZARDS IDENTIFICATION

Dangerous goods:

Dangerous goods class:	8 and subsidiary risk
Hazchem code:	2R
ERMA New Zealand Approval Code:	HSR100094

HSNO Hazard Classification:

8.2C, 8.3A Causes burns. Risk of serious damage to eyes. Toxic to aquatic life.

3. COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Entity	CAS Number	Proportion
Butanoic acid	107-92-6	> 98%
The above liquid is enclosed in a 60 ml polyethylene wick bottle.		
Formula:	C ₄ H ₈ O ₂	
Molecular Weight:	88.11	

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126, New Zealand 03 4747000.

Swallowed:	Do not induce vomiting. Never give anything to an unconscious person. Seek medical attention.
Eye:	Do NOT allow victim to rub or keep eyes closed. Rinse eyes with water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers. Seek medical advice if irritation develops.
Skin:	Wash immediately with soap and water. Remove contaminated clothes. Get medical advice if irritation develops. Wash clothes in water before reuse.
Inhaled:	Remove to fresh air.

5. FIRE FIGHTING MEASURES

Fire:	Butanoic acid is not considered to be a fire hazard.
Explosion:	Combustible liquid. Emits toxic fumes under fire conditions.
Fire Extinguishing Media:	Use whatever media are suitable for extinguishing the surrounding fire.
Protective Clothing:	Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Butanoic acid solution in Lucilure C is present in small quantities and as such presents no significant environmental hazard. It is biodegradable and water soluble and can be hosed away or absorbed with dry sand or earth.

7. HANDLING AND STORAGE:

Handling:	When opening the container and using the product, wear appropriate protective clothing (see section 8 below). Solution should be handled as a potential health hazard.
Storage:	Store in a cool, dry, dark, ventilated Area. Protect from physical damage. Keep away from heat and open flame.



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8. EXPOSURE CONTROLS & PERSONAL PROTECTIVE EQUIPMENT

Exposure standards:	Not established.
Engineering controls:	Open container in the open air. If opening in an enclosed area, a system of local or general exhaust is recommended to keep employee exposure as low as possible.
Personal protection:	When opening the container and using the product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemically-resistant rubber gloves (nitrile), goggles, and a disposable mask. Avoid inhaling vapour. Wear chemical protective eye-wear if loaded wick bottles are to be taken apart. After each days use, wash gloves, goggles and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless, yellowish or blue/green acrid smelling liquid in wick bottle
Boiling point/melting point:	>164/ -7.9°C
Specific gravity:	>0.96
Flashpoint (°C):	72°C
Auto ignition temperature:	440°C
Flammability limits (%):	Lel 2 ; uel 10
Solubility in water:	Soluble
Other properties:	Not relevant

10. STABILITY AND REACTIVITY

Stability:	The product is stable at ambient temperatures.
Conditions to avoid:	Contact with strong oxidising agents.
Material to avoid:	Strong oxidising agents.
Decomposition products:	Carbon monoxide, carbon dioxide.
Polymerisation:	No hazardous polymerisation is known to occur

11. TOXICOLOGICAL INFORMATION

Health Effects

Lucilure C is not expected to result in any health effects if used and handled as directed on the product label and in this MSDS. Should mishandling result in over-exposure, symptoms that might occur are:

Acute

Swallowed:	Harmful if swallowed.
Eye:	Causes burns. Risk of serious damage to eyes
Skin:	Causes skin burns. May be harmful if absorbed through the skin.
Inhaled:	Very destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

Chronic

Mutagen at 3Mmol/L in human HeLa cells and 2 at Mmol/L in chicken fibroblast

12. ECOLOGICAL INFORMATION

The active constituent sodium sulphide is toxic to aquatic animals, HSNO class 9.1A. However this possibility is unlikely in view of the very small quantity in the bottle.

13. DISPOSAL CONSIDERATIONS

Disposal Information:	Dispose of empty bottles by recapping, wrapping in paper and putting in garbage or burying below 500 mm with original packaging. Dispose of outer container at a local authority landfill or if not available, by burying below 500 mm in a disposal pit specifically marked and set up for this purpose clear of water ways, desirable vegetation and tree roots. Empty containers and product should not be burned.
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14. TRANSPORT INFORMATION

IATA	
Shipping Name:	Butyric acid
Hazard Class:	Class 8
UN Number:	2820

15. REGULATORY INFORMATION

ERMA New Zealand Approval Code: HSR100094
 Lucilure C is a component of Lucilure Sheep Blowfly Attractant, which is registered with the Australian Pesticides and Veterinary Medicines Authority as per APVMA Approval Number 51198.



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16. OTHER INFORMATION

This MSDS summarises 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. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including 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 this company.

END OF MSDS