

MATERIAL SAFETY DATA SHEET

Product Name: Antibiotic Simplex[®] P with Tobramycin

MSDS Date Created: 12 November, 2014

	Manufacturer	Australian Supplier:	New Zealand Supplier:
Name:	Howmedica Intl S. de R.L.	Stryker Australia	Stryker New Zealand
Address:	Raheen Business Park Limerick Ireland	8 Herbert St, St Leonards, NSW, Australia, 2065	515 Mt Wellington Highway, Auckland, New Zealand, 1060
Phone No:	+353 61 498200	+61 02 9467 1000	+64 09 573 1890
Fax No:	+353 56 229941	+61 02 9467 1010	+64 09 573 1891

Antibiotic Simplex[®] P with Tobramycin is a two component product containing:

- Antibiotic Simplex[®] Bone Cement Powder with Tobramycin
- Surgical Simplex[®] Liquid

This MSDS includes both components.

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **ANTIBIOTIC SIMPLEX® BONE CEMENT POWDER WITH TOBRAMYCIN**
Synonym(s) 6197-9-010; 6197-1-010; 6197-5-010 - PRODUCT CODES • SIMPLEX® P WITH TOBRAMYCIN

1.2 Uses and uses advised against

Use(s) CEMENTITIOUS PRODUCT • MEDICAL APPLICATIONS • ORTHOPAEDIC APPLICATIONS

1.3 Details of the supplier of the product

	Manufacturer	Australian Supplier:	New Zealand Supplier:
Name:	Howmedica Intl S. de R.L.	Stryker Australia	Stryker New Zealand
Address:	Raheen Business Park Limerick Ireland	8 Herbert St, St Leonards, NSW, Australia, 2065	515 Mt Wellington Highway, Auckland, New Zealand, 1060
Phone No:	+353 61 498200	+61 02 9467 1000	+64 09 573 1890
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EMERGENCY	+353 61 498200	13 11 26	0800 764 766

Contact Person: Colette Herbert, colette.herbert@stryker.com

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES [CLASSIFICATION] REGULATIONS 2001 OR SAFE WORK AUSTRALIA CRITERIA.

HSNO classification: None allocated.

Risk Phases: None allocated

Other Hazards: Fine powder. Avoid inhaling dust. Nuisance dust.

2.2 Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

2.3 Other hazards

Fine powder. Avoid inhaling dust. Nuisance dust.

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
METHYL METHACRYLATE STYRENE COPOLYMER	-	-	73.17%
POLYMETHYL METHACRYLATE	9011-14-7	618-466-4	14.63%
BARIUM SULPHATE	7727-43-7	231-784-4	9.76%
TOBRAMYCIN	32986-56-4	251-322-5	2.44%

4. FIRST AID MEASURE

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact the emergency contact listed above or a doctor (at once). If swallowed, do not induce vomiting. Ingestion is considered unlikely due to product form. Rinse mouth out with water and give plenty of water to drink.
First aid facilities	No information provided.

4.2 Most important symptoms and effects, both acute and delayed

Adverse effects not expected from this product under normal conditions of use.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition. Finely divided dust may form explosive mixtures with air. May evolve methyl methacrylate and styrene when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in Section 8. Clear area of all unprotected personnel. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation systems.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Barium sulphate	WES (NZ)	--	10	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Maintain dust levels below the recommended exposure standard.

PPE

- Eye / Face** Wear dust-proof goggles.
- Hands** Wear PVC, rubber, PVA or viton gloves.
- Body** When using large quantities or where heavy contamination is likely, wear coveralls.
- Respiratory** Where an inhalation risk exists, wear a Class P1 (Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	WHITE POWDER
Odour	ODOURLESS
Odour threshold	NOT AVAILABLE
pH	NOT AVAILABLE
Melting point	NOT AVAILABLE
Boiling point	NOT AVAILABLE
Flash point	NOT RELEVANT
Evaporation rate	NOT AVAILABLE
Flammability	NON FLAMMABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Vapour pressure	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Solubility (water)	INSOLUBLE
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Specific gravity	0.3

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (eg. hypochlorites) and acids (eg. nitric acid).

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	This product is expected to be of low toxicity. Under normal conditions of use, adverse health effects are not anticipated.
Skin	Not classified as a skin irritant. Contact may result in mild irritation.
Eye	Not classified as an eye irritant. Contact may cause discomfort, lacrimation and redness.
Sensitization	This product is not known to be a skin or respiratory sensitiser.
Mutagenicity	No evidence of mutagenic effects.
Carcinogenicity	No evidence of carcinogenic effects.
Reproductive	No evidence of reproductive effects.
STOT – single exposure	No known effects from this product.
STOT – repeated exposure	No known effects from this product.
Aspiration	This product does not present an aspiration hazard.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Mix components together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer for additional information. Prevent contamination of drains or waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE: DANGEROUS GOODS 2005; NZS 5433:2012, UN, IMDG OR IATA

	LAND TRANSPORT (NZS 5433)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None Allocated	None Allocated	None Allocated
14.2 Proper Shipping Name	None Allocated	None Allocated	None Allocated
14.3 Transport hazard class	None Allocated	None Allocated	None Allocated
14.4 Packing Group	None Allocated	None Allocated	None Allocated

14.5 Environmental hazards No information provided

14.6 Special precautions for user

Hazchem code None Allocated

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Approval code None allocated.

Group standard None allocated.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

NEW ZEALAND: NZIoC (New Zealand Inventory of Chemicals)
All components are listed on the NZIoC inventory, or are exempt.

16. OTHER INFORMATION

Additional information This product is used in conjunction with Surgical Simplex® Liquid. Please consult the appropriate MSDS before use.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

ANTIBIOTIC SIMPLEX[®] P WITH TOBRAMYCIN - POWDER

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CCID	Chemical Classification and Information Database (HSNO)
CNS	Central Nervous System
EC No.	EC No - European Community Number
EPA	Environmental Protection Authority [New Zealand]
GHS	Globally Harmonized System
HSNO	Hazardous Substances and New Organisms
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TWA	Time Weighted Average

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **SURGICAL SIMPLEX® LIQUID**
Synonym(s) 6197-9-010; 6197-1-010; 6197-5-010 - PRODUCT CODES • SURGICAL SIMPLEXTM P WITH TOBRAMYCIN

1.2 Uses and uses advised against

Use(s) CEMENTITIOUS PRODUCT • MEDICAL APPLICATIONS • ORTHOPAEDIC APPLICATIONS

1.3 Details of the supplier of the product

	Manufacturer	Australian Supplier:	New Zealand Supplier:
Name:	Howmedica Intl S. de R.L.	Stryker Australia	Stryker New Zealand
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Contact Person: Colette Herbert, colette.herbert@stryker.com

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES [CLASSIFICATION] REGULATIONS 2001 AND SAFEWORK AUSTRALIA CRITERIA

HSNO classification

3.1B	Flammable liquids: high hazard.
6.1D (dermal)	Substances that are acutely toxic - Harmful.
6.1D (inhalation)	Substances that are acutely toxic - Harmful.
6.1D (oral)	Substances that are acutely toxic - Harmful.
6.3A	Substances that are irritating to the skin.
6.5B	Substances that are contact sensitisers.
6.9 (Respiratory irritant)	May cause respiratory irritation.
6.9B (inhalation repeated)	Harmful to human target organs or systems.
6.9B (oral repeated)	Harmful to human target organs or systems.
9.1C	Substances that are harmful in the aquatic environment.

Risk Phrases

R11	Highly flammable
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R33	Danger of cumulative effects
R37/38	Irritating to respiratory system and skin
R43	May cause sensitization by skin contact
R52/53	Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment

Safety Phrases

S15	Keep away from heat
S23	Do not breathe gas/fumes/vapour/spray (where applicable)
S24/25	Avoid contact with skin and eyes
S28	After contact with skin, wash immediately with plenty of water
S36/37	Wear suitable protective clothing and gloves
S45	In case of accident of or if you feel unwell, seek medical advice immediately (show the label where possible)
S51	Use only in well ventilated areas
S61	Avoid release to the environment. Refer to special instructions/safety data sheets

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

2.2 Label elements

Signal word **DANGER**

Pictograms



Hazard

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.

Prevention

- P102 Keep out of reach of children.
- P103 Read label before use.
- 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.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P101 If medical advice is needed, have product container or label at hand.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment is advised - see first aid instructions.
- P330 Rinse mouth.
- P331 Do NOT induce vomiting.
- P362 Take off contaminated clothing and wash before re-use.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P370 + P378 In case of fire: Use appropriate media for extinction (applies if water increases risk).

Storage

- P405 Store locked up.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed (applies if the substance is volatile so as to generate a hazardous atmosphere).
- P403 + P235 Store in a well-ventilated place. Keep cool.

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.

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
METHYL METHACRYLATE	80-62-6	201-297-1	97.5%
N,N-DIMETHYLTOLUDINE	99-97-8	202-805-4	2.5%
HYDROQUINONE	123-31-9	204-617-8	<1%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact the emergency contact listed above or a doctor (at once). If swallowed, do not induce vomiting. Rinse mouth out with water and give plenty of water to drink.
First aid facilities	Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

May cause drowsiness or dizziness. Chronic exposure to solvents may result in liver, kidney and central nervous system (CNS) damage.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways.

5.2 Special hazards arising from the substance or mixture

Highly flammable. May evolve carbon oxides and hydrocarbons when heated to decomposition. Vapour may form explosive mixtures with air. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, pilot lights, heaters, naked lights etc. when handling. Earth containers when dispensing fluids.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

3YE

3	Foam
Y	Self Contained Breathing apparatus and protective gloves.
E	Evacuation of people in the vicinity of the incident should be considered.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in Section 8. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all ignition sources.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, preferably flammables store, removed from direct sunlight, incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate fire protection and ventilation systems.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Hydroquinone	WES (NZ)	--	2	--	--
Methyl methacrylate	WES (NZ)	50	208	100	416

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE

- Eye / Face** Wear splash-proof goggles.
- Hands** Wear PVA or viton (R) gloves.
- Body** Wear coveralls.
- Respiratory** Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	COLOURLESS LIQUID
Odour	CHARACTERISTIC PUNGENT ODOUR
Odour threshold	NOT AVAILABLE
pH	NOT AVAILABLE
Melting point	NOT AVAILABLE
Boiling point	100.5°C
Flash point	11.5°C (cc)
Evaporation rate	NOT AVAILABLE
Flammability	HIGHLY FLAMMABLE
Upper explosion limit	12.5 %
Lower explosion limit	2.1 %
Vapour pressure	40 mg Hg @ 25°C
Vapour density	NOT AVAILABLE
Solubility (water)	SLIGHTLY SOLUBLE

9.1 Information on basic physical and chemical properties

Partition coefficient	
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Specific gravity	0.949

10. STABILITY AND REACTIVITY**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), heat and ignition sources. Also incompatible with catalysts and free radical initiators.

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

Health hazard summary	Harmful - irritant. This product has the potential to cause adverse health effects with over exposure. Use safe work practices to avoid eye or skin contact and inhalation. Chronic exposure to some solvents may result in central nervous system (CNS), liver and kidney damage. Danger of cumulative effects. May cause sensitisation by skin contact.	
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness. May result in burns with prolonged contact.	
Inhalation	Harmful - irritant. Over exposure may result in irritation of the nose and throat, coughing, nausea and headache. High level exposure may result in dizziness, drowsiness, breathing difficulties and unconsciousness. Chronic exposure to some solvents may result in central nervous system (CNS), liver and kidney damage.	
Skin	Irritant. Contact may result in drying and defatting of the skin, rash and dermatitis. May be absorbed through skin with harmful effects. May cause sensitisation by skin contact.	
Ingestion	Harmful. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, dizziness and drowsiness. Aspiration may result in chemical pneumonitis and pulmonary oedema.	
Toxicity data	METHYL METHACRYLATE (80-62-6)	
	LCLo (inhalation)	17500 mg/kg/4.5 hours (rabbit)
	LD50 (ingestion)	3625 mg/kg (mouse)
	LD50 (skin)	> 5000 mg/kg (rabbit)
	TCLo (inhalation)	125 ppm (human - behavioural effect)
	N,N-DIMETHYLTOLUDINE (99-97-8)	
	LD50 (intraperitoneal)	212 mg/kg (mouse)
	HYDROQUINONE (123-31-9)	
	LD50 (ingestion)	70 mg/kg (cat)
	LD50 (intraperitoneal)	100 mg/kg (mouse)
	LD50 (intravenous)	115 mg/kg (rat)
	LD50 (subcutaneous)	182 mg/kg (mouse)
	LDLo (ingestion)	29 mg/kg (human)
	LDLo (intraperitoneal)	200 mg/kg (guinea pig)
	LDLo (intravenous)	50 mg/kg (cat)

HYDROQUINONE (123-31-9)
 LDLo (subcutaneous) 100 mg/kg (dog)
 TDLo (ingestion) 170 mg/kg (human)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The manufacturer reports the following aquatic toxicity data: LC50 (Fish) > 79 mg/L/96 hours; EC50 (Daphnia) = 69 mg/L/48 hours.

12.2 Persistence and degradability

This product is readily biodegradable.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

Aliphatic hydrocarbons behave differently in the environment depending on their size. WATER: Light aliphatics volatilise rapidly from water (half life - few hours). Bioconcentration should not be significant. SOIL: Light aliphatics biodegrade quickly in soil and water, heavy aliphatics biodegrade very slowly. ATMOSPHERE: Vapour-phase aliphatics will degrade by reaction with hydroxyl radicals.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Mix components together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer for additional information. Prevent contamination of drains or waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE: DANGEROUS GOODS 2005; NZS 5433:2012, UN, IMDG OR IATA, AND ACCORING TO THE ADG CODE



	LAND TRANSPORT (NZS 5433)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1247	1247	1247
14.2 Proper Shipping Name	METHYL METHACRYLATE MONOMER, INHIBITED	METHYL METHACRYLATE MONOMER, INHIBITED	METHYL METHACRYLATE MONOMER, INHIBITED
14.3 Transport hazard class	3	3	3
14.4 Packing Group	II	II	II

14.5 Environmental hazards No information provided

14.6 Special precautions for user

Hazchem code 3YE
 EMS F-E, S-D

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Approval code	HSR002495
Group standard	Additives, Intermediates, Process Chemicals and Raw Materials (Flammable) Group Standard 2006
Inventory listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt. NEW ZEALAND: NZIoC (New Zealand Inventory of Chemicals) All components are listed on the NZIoC inventory, or are exempt.

16. OTHER INFORMATION

Additional information This product is used in conjunction with Antibiotic Simplex® Bone Cement Powder with Tobramycin. Please consult the appropriate MSDS before use.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

WORK PRACTICES - SOLVENTS: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CCID	Chemical Classification and Information Database (HSNO)
CNS	Central Nervous System
EC No.	EC No - European Community Number
EPA	Environmental Protection Authority [New Zealand]
GHS	Globally Harmonized System
HSNO	Hazardous Substances and New Organisms
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TWA	Time Weighted Average

Revision history

Revision	Description
1.0	Initial SDS Creation.

END OF MSDS