

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****Trade name** KYBOSH INSECT KILLER**Product code** 86600249**1.2 Relevant identified uses of the substance or mixture and uses advised against****Use** Insecticide**1.3 Details of the supplier of the safety data sheet****Supplier** SBM Life Science Ltd
Unit 2,
Techno Park,
Newmarket Road,
Cambridge,
CB5 8PB
Great Britain**Telephone** +44 (0)1223 677611**Responsible Department** E-mail : sds@sbm-company.com**1.4 Emergency telephone no.****Emergency telephone no. SBM** +1 813-676-1669**UK Emergency telephone no.** +44 (0)800 3213079**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Aerosols: Category 1

H222 Extremely flammable aerosol.

H229 Pressurized container: May burst if heated.

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

F+ Extremely flammable, R12

N Dangerous for the environment, R50/53

2.2 Label elements**Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- d-Tetramethrin
- 1R-trans phenothrin

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Hazard statements

- H222 Extremely flammable aerosol.
- H229 Pressurized container: May burst if heated.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe spray.
- P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
- P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).
Pressurised container, heating will cause pressure rise with a risk of bursting.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Aerosol dispenser (AE)
d-tetramethrin/1R-trans phenothrin 0.15:0.15 % w/w

Hazardous components

R-phrase(s) according to EC directive 67/548/EEC
Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification		Conc. [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
d-Tetramethrin	1166-46-7 214-619-0	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	0.15
1R-trans phenothrin	188023-86-1	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	0.15
Distillates (petroleum), hydrotreated light	64742-47-8 265-149-8	Xn; R65 R66	Asp. Tox. 1, H304	> 1.00 – < 10.00
Butane	106-97-8 203-448-7	F+; R12	Press. Gas Flam. Gas 1, H220	> 1.00

Further information

1R-trans phenothrin	188023-86-1	M-Factor: 100 (acute), 100 (chronic)
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For the full text of the R-phrases/ Hazard statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures**

General advice	Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move the victim to fresh air and keep at rest. Call a physician or poison control center immediately.
Skin contact	Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.
Ingestion	Keep at rest. Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s). Local:, Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough Systemic:, Discomfort in the chest, Tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Dizziness, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s)., Due to its low concentration intake of a hazardous amount of active ingredient from this formulation is unlikely.
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4.3 Indication of any immediate medical attention and special treatment needed

Risks	This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.
Treatment	Local treatment: Initial treatment: symptomatic.

Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire., Heating can lead to increased pressure with risk of explosion.

5.3 Advice for firefighters

Special protective equipment for fire-fighters In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Keep people away from and upwind of spill/leak. Consider the need for evacuation. Avoid contact with spilled product or contaminated surfaces. Ensure adequate ventilation. When dealing with a spillage do not eat, drink or smoke.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up The nature of this product, when contained in commercial packs, makes spillage unlikely. However, if significant amounts are spilled nevertheless, the following advice is applicable. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean floors and contaminated objects with plenty of water.

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6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion The product is extremely flammable. Vapours may form explosive mixture with air. Fire or intense heat may cause violent rupture of packages. Keep away from heat and sources of ignition.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight. Protect from freezing. Keep containers tightly closed in a dry, cool and well-ventilated place.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

7.3 Specific end uses Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Butane	106-97-8	1,810 mg/m ³ /750 ppm (STEL)	12 2011	EH40 WEL
Butane	106-97-8	1,450 mg/m ³ /600 ppm (TWA)	12 2011	EH40 WEL

Additional advice

Observe: Exposure Limits In Air, Group 3: 100 mg/m³/ 20 ppm. (aromatic-rich hydrocarbon mixes with > 25% aromatics TRGS 901, No. 72).

8.2 Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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Respiratory protection	Personal protective equipment is not normally required when using the aerosol. However, if there is a risk of uncontrolled exposure to the contents, the following should be considered. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
Hand protection	Personal protective equipment is not normally required when using the aerosol. However, if there is a risk of uncontrolled exposure to the contents, the following should be considered. Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Eye protection	Personal protective equipment is not normally required when using the aerosol. However, if there is a risk of uncontrolled exposure to the contents, the following should be considered. Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
Skin and body protection	Personal protective equipment is not normally required when using the aerosol. However, if there is a risk of uncontrolled exposure to the contents, the following should be considered. Wear standard coveralls and Category 3 Type 6 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	aerosol
Flash point	-60 °C The value mentioned relates to the aerosol propellant.
Ignition temperature	288 °C The value mentioned relates to the aerosol propellant.
Upper explosion limit	8.4 %(V) The value mentioned relates to the aerosol propellant.
Lower explosion limit	1.8 %(V) The value mentioned relates to the aerosol propellant.
Relative vapour density	2.9 The value mentioned relates to the aerosol propellant.
Density	ca. 0.81 g/cm ³ at 20 °C
Partition coefficient: n-octanol/water	D-Tetramethrin: log Pow: 4.58 1R-trans phenothrin: log Pow: 6.1

9.2 Other information Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity****Thermal decomposition** Stable under normal conditions.**10.2 Chemical stability** Stable under recommended storage conditions.**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.**10.5 Incompatible materials** Store only in the original container.**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute oral toxicity** ATE (rat) > 2,000 mg/kg
ATE – acute toxicity estimate
Calculation method**Acute inhalation toxicity** ATE (rat) > 5 mg/l
Exposure time: 4 h
ATE – acute toxicity estimate
Calculation method**Acute dermal toxicity** ATE (rat) > 2,000 mg/kg
ATE – acute toxicity estimate
Calculation method**Skin irritation** No skin irritation (rabbit)
The information is derived from the properties of the individual components.**Eye irritation** No eye irritation (rabbit)
The information is derived from the properties of the individual components.**Sensitisation** Non-sensitizing. (guinea pig)
The information is derived from the properties of the individual components.**Assessment repeated dose toxicity**

Tetramethrin did not cause specific target organ toxicity in experimental animal studies.
1R-trans phenothrin did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

Tetramethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
1R-trans phenothrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Tetramethrin caused at high dose levels an increased incidence of tumours in mice in the following

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organ(s): testes. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

d-Phenothrin was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

D-Tetramethrin did not cause reproductive toxicity in a two-generation study in rats.
1R-trans phenothrin did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

D-Tetramethrin did not cause developmental toxicity in rats and rabbits.
1R-trans phenothrin did not cause developmental toxicity in rats and rabbits.

Further information

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Toxicity to fish**

LC50 (Oncorhynchus mykiss (rainbow trout)) 0.0010 mg/l Exposure time: 96 h

The value mentioned relates to the active ingredient D-tetramethrin.

LC50 (Brachidanio rerio (Zebra fish)) 0.00559 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient 1R-trans phenothrin.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 0.0046 mg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient 1R-trans phenothrin.

Toxicity to aquatic plants

(Scenedesmus subspicatus) > 5 mg/l

Exposure time: 72 h

The value mentioned relates to the active ingredient 1R-trans phenothrin.

12.2 Persistence and degradability**Biodegradability**

Tetramethrin:
not rapidly biodegradable
1R-trans phenothrin:
not rapidly biodegradable

Koc

Tetramethrin: Koc: 1249 - 2939
1R-trans phenothrin: Koc: 141000

12.3 Bioaccumulative potential**Bioaccumulation**

Tetramethrin:
Potential bioaccumulation
1R-trans phenothrin: Bioconcentration factor (BCF) 730 Does not bioaccumulate.

12.4 Mobility in soil**Mobility in soil**

Tetramethrin: Slightly mobile in soils
1R-trans phenothrin: Immobile in soil

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Tetramethrin: This substance is not considered to be persistent,

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bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

1R-trans phenothrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects**Additional ecological information**

No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Disposal of the liquid product when not contained in the aerosol container by incineration in an appropriately licensed commercial incinerator.

Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Ensure aerosol container is empty before disposal.
Dispose of empty and cleaned packaging safely.

SECTION 14: TRANSPORT INFORMATION**ADR/RID/ADN**

14.1 UN number	1950
14.2 Proper shipping name	AEROSOLS
14.3 Transport hazard class(es)	2.1
14.4 Packing group	NOT APPLICABLE.
14.5 Environm. Hazardous Mark	YES
Hazard no.	NOT APPLICABLE.
Tunnel Code	D

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

14.1 UN number	1950
14.2 Proper shipping name	AEROSOLS (TETRAMETHRIN)
14.3 Transport hazard class(es)	2.1
14.4 Packing group	NOT APPLICABLE.
14.5 Marine pollutant	YES

IATA

14.1 UN number	1950
14.2 Proper shipping name	AEROSOLS, FLAMMABLE
14.3 Transport hazard class(es)	2.1
14.4 Packing group	NOT APPLICABLE.
14.5 Environm. Hazardous Mark	NO

UK 'Carriage' Regulations

14.1 UN number	1950
14.2 Proper shipping name	AEROSOLS
14.3 Transport hazard class(es)	2.1
14.4 Packing group	NOT APPLICABLE.
14.5 Environm. Hazardous Mark	YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK and Northern Ireland Regulatory References**

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)

Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)

Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)

Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009

Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)

EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits

Control of Pesticide Regulations 1986

Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II

Environmental Protection (Duty of Care) Regulations 1991

The Waste Management Licensing Regulations 1994 (as amended)

Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)

Landfill Directive

Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

Water Resources Act 1991

Anti-Pollution Works Regulations 1999

Further information

WHO-classification: III (Slightly hazardous)

15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

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Text of R-phrases mentioned in Section 3

R12	Extremely flammable.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.

Text of the hazard statements mentioned in Section 3

H220	Extremely flammable gas.
H304	May be fatal if swallowed and enters airways.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Reason for Revision: Initial version

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
