SAFETY INFORMATION SHEET

Date of Issue: Nov 2018

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Name of Product: NIPPON INSECT KILLER TOTAL CONTROL

1.2 Use of the Substance/Preparation: Insecticide

1.3 Manufacturer/Distributor: Vitax Limited, Owen Street, Coalville LE67 3DE
Tel: 01530 510060 Fax: 01530 510299 Email: info@vitax.co.uk

1.4 Emergency Contact:
Tel: 01530 510060 (Office Hours)

2. HAZARDS IDENTIFICATION

2.1 Classification:

Physical Hazards: Aerosol 1 H222, H229

Health Hazards: EUH208

Environmental Hazards: Aquatic acute 1 H400 chronic 1 H410

2.2 Label elements

Hazard Pictograms

Signal Word Danger

Hazard Statements
H222 :Extremely flammable aerosol
H229 : Pressurised container: may burst if heated
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention
P102 Keep out of reach of children.
P273 Avoid release to the environment
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P271 Use only outdoors or in a well-ventilated area.

Response
P391 Collect spillage

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

Disposal
P501 : Dispose of contents/container in accordance with national regulations.

2.3 Other hazards
EUH208 Contains PERMETHRIN. May produce an allergic reaction.
Not Classified as PBT/vPvB by current EU criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Formulation Type: Aerosol

Ingredient	Registration number CAS/ EC-number	CLP-classification	w/w %
odourless kerosene	01-2119456620-43 64742-47-8 265-149-8	EUH066 Asp Tox1 H304	50-100%
butane	Exempt 106-97-8 203-448-7	Flam gas 1 H220 Press gas	5-10%
dimethoxymethane	01-2119664781-31-xxxx 109-87-5 203-714-2	Flam liq 2 H225	<1%
iso-butane	Exempt 75-28-5 200-857-2	Flam gas 1 H220 Pres gas	1-5%
propane	Exempt 74-98-6 200-827-9	Flam gas 1 H220 Press gas	1-5%

permethrin	613-058-00-2 52645-53-1 258-067-9	Acute tox. 4; H332 Acute tox. 4; H302 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-factor acute 100 chronic 10000	< 1%
tetramethrin	7696-12-0 231-711-6	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-factor: acute 10 chronic 10	< 1%

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If in doubt, get medical attention promptly.

Ingestion Rinse mouth thoroughly with water. Remove person to fresh air and keep comfortable for breathing. Get medical attention.

Skin contact Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

5.3. Advice for firefighters

Protective actions during firefighting Use water to keep fire exposed containers cool and disperse vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid inhalation of vapours and contact with skin and eyes. Ensure suitable respiratory protection is worn during removal of spillages in confined areas.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb in vermiculite, dry sand or earth and place into containers.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. HANDLING & STORAGE

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Read and follow manufacturer's recommendations. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited. Use suitable respiratory protection if ventilation is inadequate.

Advice on general occupational hygiene

Wash promptly with soap and water if skin becomes contaminated.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Do not store near heat sources or expose to high temperatures. Keep away from heat, sparks and open flame.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

ODOURLESS KEROSENE
Long-term exposure limit (8-hour TWA): OEL 1200 mg/m^3
BUTANE
Long-term exposure limit (8-hour TWA): WEL 600 ppm
Short-term exposure limit (15-minute): WEL 750 ppm
PROPAN-2-OL
Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m^3
Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m^3
ISOBUTANE
Long-term exposure limit (8-hour TWA): WEL 800 ppm
Short-term exposure limit (15-minute): WEL No std.
PROPANE
Long-term exposure limit (8-hour TWA): 500 ppm
Short-term exposure limit (15-minute): 900 ppm
DIMETHOXYMETHANE
Long-term exposure limit (8-hour TWA): WEL 1000ppm 3160 mg/m^3.
Short-term exposure limit (15-minute): 125 ppm 3950 mg/m^3
PERMETHRIN
Long-term exposure limit (8-hour TWA): 5 mg/m^3
OEL = Occupational Exposure Limit. WEL = Workplace Exposure Limit

8.2. Exposure controls

Engineering controls	Provide adequate ventilation. Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.
Personal Protection	Do not eat, drink or smoke when using the product.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
Hand protection	No specific hand protection recommended.
Other skin and body protection	Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist.
Respiratory protection	No specific recommendations. If ventilation is inadequate, suitable respiratory protection must be worn.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	clear colourless liquid.
Odour	Slight solvent.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Flash point	-60°C for lpg CC (Closed cup).
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	
Lower flammable/explosive limit:	1.4 % (lpg)
Upper flammable/explosive limit:	10.9 % (lpg)
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.75
Solubility(ies)	insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	365°C (based on major ingredient)
Decomposition Temperature	No information available.
Viscosity	No information available.
Oxidising properties	No information available.

9.2. Other information

Other information None.

10. STABILITY & REACTIVITY

10.1. Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability The product is stable under normal conditions of storage or use.

10.3. Possibility of hazardous reactions	None known.
10.4. Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid exposing aerosol containers to high temperatures or direct sunlight.
10.5. Incompatible materials	
Materials to avoid	None known.
10.6. Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

11. TOXICOLOGICAL

Acute toxicity:

Acute Toxicity (Oral LD50)	Odourless Kerosene	> 5000 mg/kg Rat
OECD 420	Permethrin	480-554 mg/kg Rat
	Tetramethrin	> 2000 mg/kg Rat
Acute Toxicity (Dermal LD50)	Odourless Kerosene	> 2000 mg/kg Rabbit
OECD 402	Permethrin	> 2000 mg/kg Rat
	Tetramethrin	> 2000 mg/kg Rat
Acute Toxicity (Inhalation LC50)	Odourless Kerosene	> 5000 mg/l Rat 4 hours
OECD 403	Permethrin	23.5 mg/litre Rat
	Tetramethrin	5.63 mg/l Rat
Skin Corrosion/Irritation:		
Erythema\eschar score	Odourless Kerosene	No erythema (0).
	Permethrin	non irritant
	Tetramethrin	non irritant
Oedema score OECD 404	Odourless Kerosene	No oedema (0).
	Permethrin	non irritant
	Tetramethrin	non irritant
Serious eye damage/irritation:	Permethrin.	Not Irritating.
	Tetramethrin.	Not Irritating.
Respiratory or skin sensitisation:		
Respiratory sensitisation	Odourless Kerosene	There is no evidence that the material can lead to respiratory hypersensitivity.
Skin sensitisation		
Buehler test: Guinea Pig	Odourless Kerosene	Not Sensitising.
OECD 406	Permethrin	Sensitising to skin of Guinea pigs
	Tetramethrin	Not sensitising
Germ cell mutagenicity:		
Genotoxicity - In Vivo	Odourless Kerosene	Negative. This substance has no evidence of genotoxic properties.
Chromosome aberration:	Permethrin	Non genotoxic
OECD Guideline 475	Tetramethrin	Non genotoxic
Carcinogenicity:		
Carcinogenicity	Odourless Kerosene	This substance has no evidence of carcinogenic properties.
Method equivalent to OECD 451	Permethrin	Non carcinogenic
	Tetramethrin	Non carcinogenic.
Reproductive Toxicity:		
Reproductive Toxicity – Fertility	Odourless Kerosene	NOAEL >3000 mg/kg/day Oral Rat
OECD Test Guideline 421		no evidence of toxicity to reproduction.
Reproductive Toxicity - Development		
Developmental toxicity:	Odourless Kerosene	NOAEL 1000 mg/kg/day Oral Rat
Method OECD 414		no evidence of toxicity to reproduction.
	Permethrin	Non reprotoxic/teratogenic
	Tetramethrin	Non reprotoxic/teratogenic
Specific target organ toxicity - repeated exposure:		
STOT - Repeated exposure	Odourless Kerosene	NOAEL 750 mg/kg Oral Rat

Product

Inhalation	Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.
Ingestion	May cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	No specific health warnings noted.
Medical Symptoms	Contains permethrin, may cause an allergic reaction.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Acute Toxicity – Fish	Odourless Kerosene	LC50 96 hours > 10 mg/l Onchorhynchus mykiss (Rainbow trout)

OECD 203	Permethrin	LC50 96 hours 0.145 mg/l Common Carp, Cyprinus carpio,
	Tetramethrin	LC50 (96h): 0,033 mg/l Brachydanio rerio (fish)
Acute Toxicity - Aquatic Invertebrates	Odourless Kerosene	EC50 48 hours > 10 mg/l Daphnia magna
OECD 202	Permethrin	EC50 48 hours : 0.320 mg/l Daphnia magna
	Tetramethrin	EC50 48 hours 0,47 mg/l Daphnia magna
Acute Toxicity - Aquatic Plants	Odourless Keroseine	Not available.
	Permethrin	E_bC_{50} (72 h)[1]: >0.011 mg/l, E_rC_{50}[2]: >0.011 mg/l Scenedesmus subspicatus (algae)
	Tetramethrin	E_rC_{50}[2]: 1.36 mg/l Scenedesmus subspicatus (algae)
Acute Toxicity – Microorganisms	Odourless Keroseine	EC50 72 hours 678 mg/l Activated sludge
QSAR modelled data	Permethrin	Activated sewage sludge, 3 hours : EC50: >1000 mg/l

12.2. Persistence and degradability

Degradability — Odourless Kerosene: This substance is inherently biodegradable
Permethrin exhibits DT50 values from 77 to 141 days at 12 degC Does not meet vP criteria but fulfils P criteria.

Biodegradation — Odourless Kerosene: No information required. Substance is a UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
Permethrin is readily taken up by aquatic organisms: bio-concentration factors range from 290 to 620 for sheepshead minnows. Permethrin does not meet B or vB screening criteria.
Tetramethrin: The substance was found to be moderately biodegradable under the test conditions within 28 days. The substance was found to be ultimate biodegradable by about 20% based on BOD measurement.

12.3. Bioaccumulative potential

Partition coefficient — Odourless Kerosene: No information required. Substance is a UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
Permethrin: BCF 290 - 620 fish
Tetramethrin: >4.09 log Kow BCF 646 fish

12.4. Mobility in soil

Mobility: Leaching potential of Permethrin and its degradates showed that very little downward movement occurs in soil. Tetramethrin: The values of Koc (2045; 2754) indicate that it is immobile and remains preferentially in soil.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

General information — Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

This material must be disposed of via an Authorised Waste/Disposal Company in accordance with Local and or National Waste Disposal Regulations.

Waste Class — This material and container must be disposed of as a HAZARDOUS WASTE.

14. TRANSPORT INFORMATION

General — This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed in cartons of less than 30kg gross weight to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed and labelled must show the following.

14.1. UN number

UN No. (ADR/RID)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950
UN No. (ADN)	1950

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	AEROSOLS
Proper shipping name (IMDG)	AEROSOLS
Proper shipping name (ICAO)	AEROSOLS
Proper shipping name (ADN)	AEROSOLS

14.3. Transport hazard class(es)

ADR/RID class	2.1
ADR/RID classification code	5F
ADR/RID label	2.1
IMDG class	2.1
ICAO class/division	2.1
ADN class	2.1

Transport labels

14.4. Packing group Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant Yes

14.6. Special precautions for user

EmS	F-D, S-U
ADR transport category	2
Tunnel restriction code	(D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

15. REGULATORY INFORMATION

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

National regulations The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824).

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment No chemical safety assessment has been carried out.

16. OTHER INFORMATION

Hazard statements in full

EUH066 Repeated exposure may cause skin dryness or cracking.
H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H229 Pressurised container: may burst if heated
H280 Contains gas under pressure, may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life.
H411 Very toxic to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value

- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.