

## SAFETY DATA SHEET

According to  
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

### Section 1. Identification of the material and the supplier

Product: **Pychlorex 48EC**  
 Product Use: Insecticide  
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **Adria Crop Protection Solutions**  
 Address: 407 State Highway 16  
 Kumeu 0841,  
 Auckland

Telephone: +64 9 412 9817  
 Fax: +64 9 412 9807  
 Website: www.adria.nz

**Emergency No: 0800 734 607 (24hr)**  
**0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 9 November 2018

### Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

**EPA Approval No: HSR000171**

#### Pictograms



Flammable    Toxic    Irritant    Chronic    Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
3.1C	H226	Flammable liquid and vapour.	Flam. Liq. 3
6.1C (oral)	H301	Toxic if swallowed.	Acute Tox. 3
6.1D (inh)	H332	Harmful if inhaled.	Acute Tox. 4
6.1E (dermal)	H313	May be harmful in contact with skin.	Acute Tox. 5
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.8B	H361	Suspected of damaging fertility or the unborn child.	Repr. 2
6.9A	H372	Causes damage to organs through single, prolonged or repeated exposure.	STOT RE 1

9.1A	H410	Very toxic to aquatic life with long lasting effects.	Aquatic Acute 1
9.2B	H422	Toxic to the soil environment.	
9.3A	H431	Very toxic to terrestrial vertebrates.	
9.4A	H441	Very toxic to terrestrial invertebrates.	

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

Response code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use dry chemical, water, carbon dioxide or foam for extinguishing.

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

Disposal Code	Disposal Statement
P501	Refer to Section 13.

### Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Content (%w/v)	CAS NUMBER.
Chlorpyrifos-ethyl	43.1 to 45.9 %	2921-88-2
Non-hazardous ingredients	To bal	-

**Section 4. First Aid Measures**

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	IF exposed or concerned or If skin irritation/rash occurs: Get medical advice/attention. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
If Swallowed	DO NOT INDUCE VOMITING. If swallowed, rinse mouth with water (only if the person is conscious). Seek medical attention immediately. For advice, contact the National Poisons Centre on 0800 POISON (0800 764766) or a doctor immediately.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

**Most important symptoms and effects, both acute and delayed**

Symptoms:

<b>Ingestion:</b>	Toxic if swallowed.
<b>Inhalation:</b>	Harmful if inhaled.
<b>Skin:</b>	May be harmful in contact with skin. Causes mild skin irritation.
<b>Eye:</b>	Causes serious eye irritation.
<b>Chronic:</b>	Causes damage to organs through single or repeated or prolonged exposure. Suspected of damaging fertility or the unborn child.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	This product is flammable.
<b>Hazards from combustion products</b>	Special exposure hazards May form flammable vapour-air mixture. According to process conditions, hazardous decomposition products may be generated. Thermal decomposition generates: Carbon dioxide. Carbon monoxide. Halogens. Nitrogen oxides. Sulphur compounds. Hydrochloric acid. Phosphate.
<b>Suitable Extinguishing media</b>	Dry chemical. Water. Carbon dioxide. Foam. Use water spray or fog for cooling exposed containers for surrounding fires.
<b>Recommended protective clothing &amp; Precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
<b>HAZCHEM CODE</b>	<b>3W</b>

**Section 6. Accidental Release Measures****Personal precautions:**

Use protective clothing as per Section 8. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately. No smoking. Eliminate sources of ignition.

**Environmental precautions:**

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

**Spill and Disposal procedures:**

Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely, according to Local Council regulations.

**Precautions for Handling:**

- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe fumes, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.
- Both local exhaust and good general room ventilation must be provided not only to control exposure but also to prevent formation of flammable mixtures.
- Use grounded electrical/mechanical equipment.
- Apply with well-maintained and calibrated spray equipment.
- This material may be harmful if swallowed, inhaled or absorbed through the skin.
  - May cause reproductive/developmental damage and/or organ damage from repeated oral exposure at high doses.

**Precautions for Storage:**

- Keep away from children.
- Store locked up.
- Store in a well-ventilated place. Keep cool.
- Storage must be generally in accordance with the NZ Standard for the Management of Agrichemicals (NZS8409).
- Store in original container tightly closed and in a locked dry, cool, well ventilated area away from foodstuffs.
- Store away from incompatible materials listed in Section 10

**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Chlorpyrifos (skin) [2921-88-2]		0.2		

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

**Engineering Controls / Industrial Hygiene**

Provide local exhaust or general room ventilation to minimize dust and/or vapour concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Restricted Entry Interval (Rei):**

The REI is 48 hours. The person in charge is responsible for making sure no person enters the application area before the end of the REI. A person may only enter the indoor treated area if PPE and RPE is worn as if they were applying the substance.

## Personal Protection Equipment



<b>Eyes</b>	Safety goggles with side-shields.
<b>Skin</b>	Avoid contact with eyes and skin. Avoid inhalation of vapour or spray mist. When mixing or applying, wear chemical resistant overalls, chemical resistant boots and gloves, chemical resistant footwear plus socks, chemical resistant head gear, eye protection. Clean protective clothing daily after work. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Avoid handling, mixing or use of the product or container near heat, flame or other sources of ignition. Do not use near air vents or ducts.
<b>Respiratory</b>	Respirator (organic vapour and particulate matter) should be used if airborne particles are generated when handling this material.
<b>General</b>	Do not eat, drink or smoke while using product. Remove protective clothing immediately after handling this product and wash hands and skin before meals and after work.

### Section 9 Physical and Chemical Properties

<b>Appearance</b>	Liquid
<b>Colour</b>	Yellow
<b>Odour</b>	Aromatic
<b>Odour Threshold</b>	Not available
<b>pH</b>	6.2
<b>Melting Point/Boiling Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	>46°C
<b>Flammability</b>	Not available
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Density</b>	1.074(20°C)
<b>Water Solubility</b>	Not available
<b>Partition Coefficient:</b>	Not available
<b>Auto Ignition Temperature</b>	476°C
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Particle Characteristics</b>	Not available

### Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	May release flammable gases.
<b>Conditions to Avoid</b>	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
<b>Incompatible Materials</b>	Strong oxidizers.
<b>Hazardous Decomposition Products</b>	According to process conditions, hazardous decomposition products may be generated. Thermal decomposition generates: Carbon dioxide. Carbon monoxide. Halogens. Nitrogen oxides. Sulphur compounds. Hydrochloric acid. Phosphate.

**Section 11 Toxicological Information****Acute Effects:**

<b>Swallowed</b>	Toxic if swallowed. Acute oral LD50 = 291.5mg/kg
<b>Dermal</b>	May be harmful in contact with skin. LD50 = 2383mg/kg
<b>Inhalation</b>	Harmful if inhaled. LC50 (4 h) for rats = 2.41mg/l
<b>Eye</b>	Causes serious eye irritation.
<b>Skin</b>	Causes mild skin irritation.

**Chronic Effects:**

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Causes damage to organs through single exposure.
<b>STOT/RE</b>	Causes damage to organs through prolonged or repeated exposure.

**Section 12. Ecotoxicological Information**

<b>Ecological effects information</b>	9.1A = Very toxic to aquatic life with long lasting effects. 9.2B = Toxic to the soil environment. 9.3A = Very toxic to terrestrial vertebrates. 9.4A = Very toxic to terrestrial invertebrates.
<b>Persistence and degradability</b>	No data available
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	No data available
<b>Other adverse effects</b>	No data available
<b>Acute fish toxicity:</b>	LC50 (96 h) = 0.3035 mg/l
<b>Toxicity for daphnia:</b>	LC50 (48 h) 0.0003 mg/l
<b>Bees:</b>	<b>THIS PRODUCT IS VERY TOXIC TO BEES. Do not apply this product to any plant or tree likely to be visited by bees:</b> a) At the time of application; or b) Immediately after application until spray has dried; or c) In areas where bees are foraging.
<b>Precautions:</b>	Do not allow to enter waterways.

**Section 13. Disposal Considerations****Disposal Method:**

Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.

**Empty container precautions:**

Avoid contamination of any water supply with chemical or empty container.

**Precautions or methods to avoid:** Avoid release to the environment.

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



### Road, Rail, Sea and Air Transport

<b>UN No</b>	3017
<b>Class - Primary</b>	6.1
<b>Packing Group</b>	III
<b>Proper Shipping Name</b>	<b>ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC (Chlorpyrifos (ISO), 48%, Hydrocarbon-solvents (Aromatic)),</b>
<b>Marine Pollutant</b>	Yes
<b>Special Provisions-Limited Quantities</b>	If the product's individual container is below 5L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

### Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR000171

HSNO Classification: 3.1C, 6.1C(oral), 6.1D(inh), 6.1E(dermal), 6.3B, 6.4A, 6.8B, 6.9A, 9.1A, 9.2B, 9.3A, 9.4A

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity</b>
Certified Handlers	Not required
Location Certificate	500L(>5L), 1500L (<5L): 250L open
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Fire Extinguishers (Schedule 4)	500L – 2 extinguishers
Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
Tracking (Schedule 26)	Not required
<b>HSNO Additional Controls (Restrictions of use)</b>	<b>Refer to EPA <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for controls document - HSR000171</b>
Spray Drift	(1) No person may apply the substance in a manner that results in adverse effects beyond the boundary of the subject property. (2) Any person applying the substance must take all reasonable care to avoid off-target movement of the substance.
Bees:	THIS PRODUCT IS VERY TOXIC TO BEES. Do not apply this product to any plant or tree likely to be visited by bees: a) At the time of application; or b) Immediately after application until spray has dried; or c) In areas where bees are foraging.
Notification:	Notification is only required for outdoor use, and when used in a wide dispersive manner. The person applying the substance in this situation must:

	<ul style="list-style-type: none"> <li>- Give written notice to anyone likely to be directly affected (such as owners and occupiers of land, property, buildings or houses immediately next to the application area).</li> <li>- Ensure the notification is given at least 2 working days before, but no more than 4 weeks before, each application of the product.</li> <li>- Ensure the written notice includes: <ul style="list-style-type: none"> <li>a) Where the product will be applied;</li> <li>b) The date and approximate duration of each application;</li> <li>c) The steps that notified parties should take to avoid exposure;</li> <li>d) The name of the organisation(s) applying the product;</li> <li>e) Contact details for the person in charge of the application (phone, email or postal address, including a contact number for immediate contact during application).</li> </ul> </li> </ul>
RESTRICTED ENTRY INTERVAL (REI):	The REI is 48 hours. The person in charge is responsible for making sure no person enters the application area before the end of the REI.
77A	<p>a) This substance must not be applied onto or into water.</p> <p>b) <b>CONTROL R-3:</b> Application parameters:  (1) The person in charge of the application of a substance and any person applying the substance must ensure that application of the substance is carried out in accordance with the following application restrictions:</p> <p>The substance may be applied at a maximum rate of 1500 g chlorpyrifos / ha.</p> <p>c) <b>CONTROL/LABEL STATEMENT R-8:</b>  Identification as an organophosphate or carbamate substance  (1) A person must not supply a hazardous substance to any other person unless the substance label clearly states that the substance is an organophosphate -containing substance.</p>
<b>Hazardous Property Controls Notice 2017</b>	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 2	Certain substances restricted to workplaces only.
HPC Notice Part 3	Hazardous substances in a place other than a workplace.
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 pesticides.
<b>ACVM Act and Regulations</b>	
ACVM Approval No See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration controls	P5585



For proper and safe use of this product, please refer to the approval conditions laid down on the product label. The data contained in this safety data sheet is based on our current knowledge and describes the product only with regard to safety requirements. The data does not describe the products properties. Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any existing laws and legislation are observed.

### Glossary

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

### References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

### Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact Adria, if further information is required.

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