

## SAFETY DATA SHEET

### Section 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

<b>Product Name:</b>	<b>ARILON® INSECTIDE</b>
<b>Design Code:</b>	A20382A
<b>Recommended Use:</b>	Insecticide for control of cockroaches, ants, and houseflies.
<b>Company Details:</b>	<b>Syngenta Crop Protection Limited</b>
<b>Address:</b>	<b>Tower II, Level 7, 110 Symonds Street Private Bag 92618, Symonds Street AUCKLAND NEW ZEALAND</b>
<b>Telephone number:</b>	<b>(weekdays) 09 - 306 1500</b>
<b>Emergency Telephone number:</b>	<b>(24 Hours) 0800 734 607</b>
<b>National Poisons &amp; Hazchem Information Centre :</b>	<b>0800 POISON (0800 764 766)</b>
<b>Date of Preparation:</b>	<b>8 March 2013</b>

### Section 2: HAZARDS IDENTIFICATION

<b>Hazard classification:</b>	6.1D, 6.9A, 9.1A, 9.3C, 9.4A
<b>Priority Identifier:</b>	DANGER KEEP OUT OF REACH OF CHILDREN
<b>Secondary Identifiers:</b>	6.1D = Acute oral toxicant 6.9A = Target organ systemic toxicant 9.1A = Aquatic toxicant 9.3C = Terrestrial vertebrate toxicant 9.4A = Terrestrial invertebrate toxicant

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<i>Pure Substance:</i>	
<b>Chemical Identity of pure substance:</b>	(S)-methyl 7-chloro-2,5-dihydro-2-[[[(methoxycarbonyl)4(trifluoromethoxy)phenyl]amino]-carbonyl]indeno[1,2-e][1,3,4]oxadiazine-4a-(3H)-carboxylate
<b>Common Name:</b>	Indoxacarb
<b>Synonyms:</b>	DPX-MP062 Claridox
<b>CAS number:</b>	173584-44-6

<i>Mixture:</i>		
<b>Chemical Identity of ingredients:</b>		
<b>Ingredient</b>	<b>CAS no.</b>	<b>Content (% w/v)</b>
<b>Indoxacarb</b>	173584-44-6	20%
Related Isomers and Impurities		<10%
Inert Ingredients		>60%

*NOTE : only hazardous components need to be listed.*

## Section 4: FIRST AID MEASURES

<b>Necessary First Aid measures:</b>	<p>For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.</p> <p>Swallowed: Harmful if swallowed, rinse mouth with water, DO NOT induce vomiting. For advice, contact the National Poisons Centre 0800 POISON (0800 764766) or call a doctor immediately.</p> <p>Eye: If concentrate is splashed in eyes, flush with running water for least 15 minutes. Take to hospital without delay. For advice contact the National Poisons Centre 0800 POISON (0800 764766)</p> <p>Skin: If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with running water. DO NOT scrub the skin. Remove and wash contaminated clothing before reuse.</p> <p>Inhaled: If inhaled move the victim to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.</p>
<b>Poisoning symptoms:</b>	<p>No case of human poisoning due to this product is on record. The poisoning symptoms observed for laboratory mammals were non-specific.</p>
<b>Workplace facilities:</b>	<p>No specific facilities required. Standard emergency equipment must be available.</p>
<b>Hygiene Practices:</b>	<p>Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When mixing or applying, wear protective clothing, including face shield, impervious gloves and footwear. If clothing becomes contaminated with product, remove clothing immediately. DO NOT eat, drink or smoke while using. Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work.</p>
<b>Notes for Medical Personnel:</b>	<p>No specific antidote is available. If poisoning is suspected apply symptomatic therapy.</p>

## Section 5: FIRE-FIGHTING MEASURES

<b>Type of Hazard:</b>	Non-flammable.
<b>Fire Hazard Properties:</b>	Handle this material as if it were a fire and explosion hazard.
<b>Regulatory Requirements:</b>	Not required
<b>Extinguishing Media and methods:</b>	Water, Water Spray, Foam, Dry Chemical, CO2.
<b>Hazchem Code:</b>	2X
<b>Further Information:</b>	<p>Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Control runoff.</p> <p>For small fires, if area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated.</p> <p>Cool containers / tanks with water spray.</p>

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	<b>Emergency Procedures:</b> Ensure suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.
<b>Environmental Precautions:</b>	Washings must be prevented from entering surface water drains or waterways.
<b>Procedure for spill:</b>	<ol style="list-style-type: none"><li>(1) Keep all bystanders away.</li><li>(2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.</li><li>(3) Reposition any leaking containers so as to minimise further leakage.</li><li>(4) Dam and absorb spill with an absorbent material (e.g. sand or soil).</li><li>(5) Shovel the absorbed spill into drums.</li><li>(6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.</li><li>(7) Prevent liquid from entering sewers, waterways or low areas.</li></ol>
<b>Procedure for Disposal:</b>	Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements. It is suggested: <ul style="list-style-type: none"><li>• For quantities up to 50 litres of product bury in a secure approved landfill site.</li><li>• For quantities greater than 50 litres seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.</li></ul>

## Section 7: HANDLING AND STORAGE

<b>Precautions for safe handling:</b>	<b>Handling:</b> Avoid skin and eye contact. Avoid inhaling the vapour, or spray mist. Wash thoroughly after handling. Wash clothing after use.
<b>Regulatory Requirements:</b>	This product must be tracked.
<b>Handling practices:</b>	Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.
<b>Approved Handlers:</b>	Approved Handlers required at time of use.

<b>Conditions for Safe Storage:</b>	<b>Storage:</b> Keep out of reach of children. Keep in original containers and tightly closed. Keep away from food, drink and animal feeding stuffs. Store in the closed, original container in a dry, well ventilated area, as cool as possible out of direct sunlight and under lock and key. Keep from contact with fertilisers, fungicides and seeds. DO NOT store with Classes 1, 2, 3.2,4 or 5 substances. Stores containing more than 100 kg of this product, either alone or in aggregate with others.
<b>Store Site Requirements:</b>	Signage will be required at sites holding 100 litres or more of any product classified as 9.1D (eg ARILON). and secondary containment for sites containing 1000 litres.
<b>Packaging:</b>	Store in original container, tightly closed, away from foodstuffs.

## Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

<i>Workplace Exposure Guidelines:</i>	
<b>Workplace Exposure Standards:</b>	Indoxacarb PEL (OSHA) Particulates (Not Otherwise Regulated) 15 mg/m <sup>3</sup> , 8 Hr. TWA, total dust 5 mg/m <sup>3</sup> , 8 Hr. TWA, respirable dust
<b>Application in the workplace:</b>	Not required
<b>Exposure standards outside the workplace:</b>	Not required
<b>Engineering controls:</b>	Use only with adequate ventilation. Keep container tightly closed. <b>DO NOT</b> generate dust. Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of agrichemical NZS8409.
<b>Personal Protection:</b>	Use only protective equipment bearing the mark of the Standards Association with Australia/ New Zealand. Wear Safety glasses. Wear overalls, chemical splash goggles and face shield when the possibility exists for eye or face contact from airborne material.  Respiratory protection should not be required for normal use and handling. During abnormal exposures or when there is a chance that the AEL will be exceeded, use of an approved respirator is recommended.  Wear protective clothing such as impervious gloves, waterproof hat, coat, and trousers when using.
<b>General Hygiene:</b>	Change work clothes daily. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust or spray mist. If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Tan
<b>Odour:</b>	Slight, non-descript
<b>Density:</b>	0.60 g/cm <sup>3</sup> at 20°C
<b>Corrosive properties:</b>	Non corrosive
<b>Oxidising properties:</b>	Not oxidising
<b>Explosive properties:</b>	Not explosive
<b>Water solubility:</b>	0.2 ppm (a.i.)

## Section 10: STABILITY AND REACTIVITY

<b>Stability of the Substance:</b>	Stable under standard conditions.
<b>Conditions to Avoid:</b>	None known
<b>Material to Avoid:</b>	Not applicable
<b>Hazardous decomposition products</b>	Not applicable
<b>Hazardous polymerisation</b>	Not applicable
<b>Specific Data</b>	Not applicable

## Section 11: TOXICOLOGICAL INFORMATION

### HSNO Classifications:

6.1D = Acute oral toxicant  
6.9A = Target organ systemic toxicant  
9.1A = Aquatic toxicant  
9.3C = Terrestrial vertebrate toxicant  
9.4A = Terrestrial invertebrate toxicant

### Acute Effects (Undiluted product)

Swallowed:	LD <sub>50</sub>	1,909 mg/kg (rat)
Dermal absorption:	LD <sub>50</sub>	>5000 mg/kg (rat)
Inhaled:	LC <sub>50</sub> (4 h)	> 4.8 mg/L mg/m <sup>3</sup> (rat)
<b>Irritation</b>		
Eye:	<b>SLIGHT IRRITANT</b> (rabbit/ HSNO Classification)	
Skin:	<b>SLIGHT IRRITANT</b> (guinea pigs/ HSNO Classification)	
<b>Sensitization</b>	<b>NOT A SKIN SENSITISER</b> (LLNA method)	

### Chronic / Long Term Effects (Active Ingredient)

Repeated oral dosing with DPX-MP062 caused mild haemolytic anaemia and reduced body weight gain in male and female rats; additionally, female rats experienced weakness and incoordination while male rats exhibited some changes in clinical chemical measurements. The No-Observed-Effect-Level (NOEL) in a 90-day repeated oral dosing study was 100 ppm for male rats and 25 ppm for female rats.

Based on animal data from DPX-JW062 (50% KN128, Active Ingredient), the following chronic effects may occur in animals with DPX-MP062.

Ingestion of DPX-JW062 by dogs for one-year caused haemolytic anaemia with secondary histopathological changes and decreased body weights. The NOEL for both male and female dogs was 40 ppm. Effects in male and female rats that were fed DPX-JW062 in their diets for two-years include decreased body weight, in addition females showed signs of neurotoxicity, some mortality, and a few incidences of histopathologic changes in the brain (probably secondary to seizures). The NOEL for the eighteen month mouse feeding study was 20 ppm in male and female mice.

Tests have shown that DPX-MP062 does not cause genetic damage in bacterial or mammalian cell cultures or in animals.

Based on animal data from DPX-JW062 (50% KN128, Active Ingredient), DPX-MP062 is not considered a carcinogenic or reproductive hazard.

DPX-MP062 is not considered a developmental hazard. The maternal and developmental NOEL was 2.0 mg/kg.

## Section 12: ENVIRONMENTAL INFORMATION

### HSNO Classifications:

6.1D = Acute oral toxicant  
6.9A = Target organ systemic toxicant  
9.1A = Aquatic toxicant  
9.3C = Terrestrial vertebrate toxicant  
9.4A = Terrestrial invertebrate toxicant

### Environmental Risk and Safety Phrases:

This substance is not to be applied in agriculture and in a wide dispersive manner.  
This substance is not to be applied onto or into water.

The information presented below is for the active ingredient, indoxacarb. A thorough review of environmental information is not possible in this document.

### Ecotoxicity Effects

<b>Toxicity to Birds:</b>	LD <sub>50</sub> > 2,250 mg/kg (mallard duck) LD <sub>50</sub> 98 mg/kg mg/kg (bobwhite quail)
<b>Acute toxicity to fish:</b>	LC <sub>50</sub> (96 h) = 0.65 mg/L (Rainbow trout) LC <sub>50</sub> (96 h) = 0.90 mg/L (Bluegill sunfish)
<b>Growth inhibition, Algae:</b>	EC <sub>50</sub> (120 h) > 0.11 mg/L Aquatic photolysis 3.8 days (pH 5.0))
<b>Toxicity to aquatic Invertebrates:</b>	LC <sub>50</sub> (48 h) = 0.60 mg/L (Daphnia magna (water flea))
<b>Toxicity to soil dwelling organisms:</b>	LC <sub>50</sub> (14 days) = > 1,250 mg/kg (earthworms)
<b>Toxicity to Bees:</b>	LD <sub>50</sub> (48 h oral and contact) = 0.18 µg/bee LD <sub>50</sub> (48 h) > 1,000 ppm/bee. (9.4A)

## Section 13: DISPOSAL CONSIDERATIONS

### Product Disposal:

Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

### Container Disposal:

#### For HDPE / Plastic containers:

Ensure the container is empty. Triple rinse empty container and add the rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

## Section 14: TRANSPORT INFORMATION

<b>Rail / Road (RID/ADR)</b>	UN-No:	3077
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains Indoxacarb)
<b>Sea (IMDG-Code)</b>	UN-No:	3077
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains Indoxacarb)
<b>Air (ICAO/IATA)</b>	UN-No:	3077
	Class:	9
	Packaging Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains Indoxacarb)

## Section 15: REGULATORY INFORMATION

<b>HSNO Approval Number:</b>	HSR100291
<b>HSNO Controls (inc. Tracking and Record Keeping):</b>	See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for controls.
<b>ACVM Registration:</b>	NA
<b>ACVM Controls:</b>	See <a href="http://www.foodsafety.govt.nz/industry/acvm">www.foodsafety.govt.nz/industry/acvm</a> for registration conditions.

## Section 16: OTHER INFORMATION

**Note:** This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

**CONTACT POINT:** Business Manager - Crop Protection: (09) 306 1503  
**24 HOURS EMERGENCY CONTACT:** 0800 734 607

This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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