MATERIAL SAFTEY DATA SHEET

Koala 32.5 % SC

IDENTIFICATION OF THE SUPPLIER:

Agro Chemical Industries LTD (ACI)
Amman – Jordan
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Tel. +962 6 5548224/5
Fax. +962 6 5548220
Website / E-mail: www.aci.com.jo / info@aci.com.jo

PRODUCT IDENTIFICATION:

Common Name: Azoxystrobin + Difenoconazole
Trade Name: Koala 32.5 SC
Uses category: fungicide
Type of formulation: Suspension Concentrate (SC)

Chemical Name:	Azoxystrobin methyl (*E*)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate	Difenoconazole *cis,trans*-3-chloro-4-[4-methyl-2-(1*H*-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-2-yl]phenyl 4-chlorophenyl ether
Chemical Formula:	$C_{22}H_{17}N_3O_5$	$C_{19}H_{17}Cl_2N_3O_3$
Molecular Weight:	403.4	406.3

PRODUCT COMPOSITION:

Active Ingredient:	% w/v	CAS #
Azoxystrobin	20%	*[131860-33-8]*
Difenoconazole	12.5%	*[119446-68-3]*

Inert materials: up to 1 liter

HAZARDS IDENTIFICATION:

Hazard Classification:

Classified as a hazardous chemical according to the Australian criteria for the classification of chemicals

Risk Phrases:

R20 Harmful by inhalation. R37 Irritating to respiratory system R43 May cause sensitization by skin contact.

FIRST-AID MEAUSRES:

Ingestion:

If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Skin contact:

Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Inhalation:

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Information Centre immediately.

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FIRE-FIGHTING MEASURES: -

Suitable Extinguishing Media:
Extinguishing media - small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide extinguisher. DO NOT use direct jet of water. Extinguishing media - large fires Use alcohol-resistant foam or water spray. DO NOT use direct jet of water.

Hazards from Combustion Products:
This product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion. Combustion products are toxic and /or irritant. Exposure to decomposition products may be a hazard to health.

Special Protective Precautions and Equipment for Fire Fighters:
When fighting a major fire wear self-contained breathing apparatus and protective equipment.

ACCIDENTAL RELEASE:

Emergency Procedures:
In case of spillage it is important to take all steps necessary to
- Avoid eye and skin contact
- Avoid contamination of waterways

Methods and Materials for Containment and Clean Up:
Procedure for spill
(1) Keep all bystanders away
(2) Wear full length clothing and PVC gloves
(3) Reposition any leaking containers so as to minimise further leakage
(4) Dam and absorb spill with an absorbent material (eg sand or soil)
(5) Shovel the absorbed spill into drums
(6) Disposal of the absorbed material will depend upon the extent of the spill
- For quantities up to 50 L of product bury in a secure landfill site
- For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established

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(7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable

PERSONAL PROTECTION/SAFTETY:

	Component	Exposure limit	Value type
National Exposure Standards:	No exposure standard allocated		
Biological Limit Values:	No biological limit allocated		
Engineering Controls:	No special requirements. Product is used outdoors.		

Personal Protective Equipment:

Harmful if inhaled. May irritate the eyes, nose and throat. Repeated exposure may cause allergic disorders. Avoid contact with the eyes. DO NOT inhale spray mist. When opening the container and mixing and loading the product wear:

- cotton overalls buttoned to the neck and wrist (or equivalent clothing)
- elbow-length chemical resistant gloves

When using the prepared spray by airblast or groundboom wear:

- cotton overalls buttoned to the neck and wrist (or equivalent clothing)
- elbow-length chemical resistant gloves
- half facepiece respirator

Wash hands after use. After each days use wash gloves, respirator (and if rubber was with detergent and warm water) and contaminated clothing.

HANDLING AND STORAGE:

Precautions for Safe Handling:

Harmful if inhaled. May irritate the eyes, nose and throat. Repeated exposure may cause allergic disorders. Avoid contact with the eyes. DO NOT inhale spray mist. When opening the container and mixing and loading the product wear:

- cotton overalls buttoned to the neck and wrist (or equivalent clothing)
- elbow-length chemical resistant gloves

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Conditions for Safe Storage:
Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight.

STABILITY AND REACTIVITY:

Chemical Stability: Stable at normal ambient temperature and pressure.
Conditions to Avoid: None known.
Incompatible Materials: None known.
Hazardous Decomposition Products: Combustion or thermal decomposition will evolve toxic and irritant vapors
Hazardous Reactions: Hazardous polymerization does not occur.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Light yellow to yellow
Odor: characteristic odor
PH: 5 - 9 (1% aqueous solution @ 20 - 25 ^{o}C).
Density: 1.1 g/ ml @ 20° C
Flammability: Not flammable
Explosivity: Not explosive
Corrosivity: Not corrosive

TOXICOLOGICAL INFORMATION:

Oral toxicity: LOW TOXICITY Tests on rats indicate this product has a low toxicity following single doses of undiluted product.

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(LD50 = >2000 mg/kg)

Dermal toxicity: LOW TOXICITY Tests on rabbits indicate this has a low toxicity following skin contact with undiluted product (LD50 = >2000 mg/kg)

Inhalation: HARMFUL Tests on rats indicate this product is harmful due to inhalation of undiluted product. LC50 (4h) = 2.06 mg/L air)

Skin irritation: Slight irritant

Eye irritation: Moderate irritant

Sensitisation: Sensitizer

Chronic: Azoxystrobin and difenoconazole technical have been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic neurotoxic or reproductive effects.

ECOLOGICAL INFORMATION: -

Ecotoxicity: **Moderately toxic to fish** LC50 Oncorhynchus mykiss (rainbow trout), 1.76 mg/L , 96 h LC50 Cyprinus carpio (Carp), 4.2 mg/L , 96 h

Highly toxic to algae ErC50 Pseudokirchneriella subcapitata (green algae), 0.59 mg/L, 72 h

Moderately toxic to certain aquatic invertebrates EC50 Daphnia magna (Water flea), 1.1 mg/L , 48 h

Slightly toxic to soil dwelling organisms: LC50 >1500 mg/kg soil in earthworm

Non toxic to bees: Oral LD50 > 500 µg/bee, Contact LD50 >1800 µg/bee

Persistence and Degradability: Azoxystrobin is stable in water and is not persistent in soil. Difenoconazole is persistent in water and is not persistent in soil.

Mobility Azoxystrobin has low to very high mobility in soil. Difenoconazole has low mobility in soil.

Environmental Fate Azoxystrobin is incorporated into organic molecules.

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(Exposure):	Difenoconazole is eventually mineralised.
Bioaccumulative Potential:	Azoxystrobin has medium potential for bioaccumulation. Difenoconazole has high potential to bioaccumulate.

DISPOSAL CONSIDERATIONS:

Disposal Methods and Containers:	Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. DO NOT burn empty containers or product.

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