



MATERIAL SAFETY DATA SHEET

DRAGOCOMBI[®] 500EC

ASTRA INDUSTRIAL COMPLEX CO., LTD. (ASTRACHEM)
P.O. BOX 30447, AL-KHOBAR 31952
KINGDOM OF SAUDI ARABIA

1. PRODUCT IDENTIFICATION

Product Name: DRAGOCOMBI[®] 500EC
Chemical Class: Organophosphorus insecticide

USE: DRAGOCOMBI 500EC is an Insecticide Emulsifiable Concentrate formulation based on two organophosphorus active ingredients, Dimethoate and Chlorpyrifos. It is used as a systemic insecticide and acaricide with contact and stomach action to control a wide range of pests including: aphids, mites, grasshoppers, white flies, scale; thrips, Leafminers and many others in cereals, citrus, cotton, grapes, vegetables, potatoes and other crops.

Producer: Astra Industrial Complex Co., Ltd.
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Contents (g / L)	Chemical structure
Diamethoate IUPAC Name. O,O-dimethyl S-methylcarbamoyl-methyl phosphorodithioate; 2-dimethoxyphosphinothioylthio-N-methylacetamide CAS No. 60-51-5	226.53 (pure 222)	
Chlorpyrifos IUPAC Name: O, O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate CAS No. 2921-88-2	283.69 (pure 278)	
Organic solvents	60.00	
Formulation aids	522.66	



3. HAZARD IDENTIFICATION.

ACUTE EFFECTS

Swallowed:

The concentrate is considered harmful if swallowed. It will induce cholinesterase inhibition if swallowed in sufficient quantity.

Physical hazards:

None

Health hazards:

Inhalation:

Inhalation of solvent may cause headache, nausea, and intoxication. Inhalation of spray mists may cause effects due to Dimethoate and Chlorpyrifos, such as cholinesterase inhibition.

Eye:

Will produce mild irritation with the possibility of some injury.

Skin:

The product may cause skin and eye irritation. The active ingredient is readily absorbed through the skin and eyes. Prolonged or repeated exposure may cause defatting of skin, which could lead to secondary dermatitis from the action of the solvent and surface-active agents.

4. FIRST AID MEASURES

First Aid:

Swallowed:

If poisoning occurs, contact a doctor or Poisons Information Center. Do not give fluids or induce vomiting to a person who is unconscious or having convulsions.

If swallowed give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.

Eye:

Irrigate for 15 minutes with copious quantities of water with eyelids held open. Seek medical advice.



Skin:

Never give fluids by mouth to a person who is unconscious or having convulsions. Remove contaminated clothing and launder before re-use. Wash affected area thoroughly with soap and water. If poisoned by skin absorption give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek medical advice. Get to a doctor or hospital promptly.

Inhalation:

Remove to fresh air until recovered if poisoned by absorption through the lungs give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital promptly.

Advice to doctor:

Cholinesterase inhibitor. Atropine treatment may be necessary along with 1 g IV Pralidoxime for profound weakness or muscle twitching-curare therapy is contraindicated. Do not give adrenergic amines, aminophylline, succinylcholine, phenothiazines, or reserpine alkaloids or oils. Treat pulmonary pneumonitis and bronchopneumonia secondary to pulmonary oedema.

5. FIRE FIGHTING MEASURES

Extinguishing Media:

Alcohol" foam, water fog, dry chemical, carbon dioxide

Fire and Explosion Hazards:

Flash point: 38.0 °C

Fire Fighting Instructions:

Product will burn readily. Will emit toxic fumes of dimethyl sulfide, methyl mercaptans, carbon monoxide, carbon dioxide, phosphorous pentoxide and nitrogen oxides if involved in fires or exposed to extreme heat. Breathable air apparatus may have to be worn in confined spaces.



6. ACCIDENTAL RELEASE MEASURES

Contain spill and absorb with sand or proprietary absorbent (vermiculite). Prevent from entering drains, waterway or sewers. Collect in sealed open top containers for disposal. Treatment with alkaline materials such as dilute lime will decompose the active ingredient(s). At pH 9, 50% of dimethoate will decompose in 12 days at average temperatures.

Disposal:

Triple rinse containers, add rinsate to the spray tank, then offer container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.

Waste disposal by industrial incineration or burial at a site approved by local authorities.

7. HANDLING AND STORAGE

Caution:

May be harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilizers. Classified as a dangerous good for transport by road, rail, sea or air.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION.

Engineering Controls:

Natural ventilation only required when handling the concentrate. A local exhaust should be used in confined areas to keep the level of solvent within acceptable limits.

Personnel Protection:

Eye Protection: Safety glasses or goggles.

Clothing: Long sleeved shirt and long pants, shoes with socks.

Gloves: Chemical resistant gloves.

Respirator: All pesticide handlers must wear a respiratory protection device when working.



User Safety Recommendations:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES.

Assay:	Chlorpyrifos	278 ± 13.9 g / L
	Dimethoate	222 ± 11.1 g / L
Appearance:	Clear, light brown liquid.	
Odour:	Characteristic	
Density:	1.080 - 1.100. Kg/L	
Acidity as H ₂ SO ₄ :	0.5% (w/w) max	
Flash point:	38 °C	
Water content:	<0.2% w/w	
Solubility in water:	Emulsifiable.	

10. STABILITY AND REACTIVITY

Stability:

Stable under room temperature.

Incompatibility:

Strong oxidizing agents. Acids and alkaline materials.

Hazardous Polymerization:

Hazardous demposition only expected when material when material involved in fires or subjected to extreme heat

Conditions to avoid:

Keep away from heat. Keep away from sources of ignition, No smoking.

11. TOXICOLOGICAL INFORMATION

Formulation:

Acute oral LD₅₀ (rat): >600 mg/Kg

Technical:

Acute oral LD₅₀ (rat) Chlorpyrifos: 150 mg/Kg

Acute oral LD₅₀ (rat) Dimethoate: 387 mg/Kg.



12. ECOLOGICAL INFORMATION.

Keep out of water supplies ground water or open water. This product is toxic to bees, fish and wildlife including birds and waterfowl.

Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

13. DISPOSAL CONSIDERATION

Disposal Methods:

Pesticide wastes are toxic. Do not reuse product containers. Dispose of product containers, waste containers and residues according to local health and environmental regulations.

Container Disposal:

Empty container retains product residue. Triple rinse empty containers, return rinse water to dilution mixture, and dispose of dilution mixture as a hazardous waste if it cannot be disposed of by use according to label instructions. Do not reuse container. Offer if for recycling or reconditioning, or puncture and dispose of in properly permitted landfill.

14. TRANSPORT INFORMATION

Proper Shipping Name:	Organophosphorus liquid pesticide
UN number	UN3017
Class	6.1
Packing Group	III
Marine Pollutant	Yes

15. REGULATORY INFORMATION.

SARA title III classification:

Section 302/304

Section 311/212

16. OTHER INFORMATION.

Buyer assumes all responsibility for safety and use not in accordance with the product label instructions.