



Safety Data Sheet

Issue Date: 26-Aug-2008

Revision Date: 26-Oct-2015

Version 2

1. IDENTIFICATION

Product Identifier

Product Name **DICOFOL 4E**

Other means of identification

SDS # MANA-015

Registration Number(s) EPA Reg. No. 66222-56
UN/ID No UN3082

Recommended use of the chemical and restrictions on use

Recommended Use EPA registered pesticide.

Details of the supplier of the safety data sheet

Manufacturer Address

Makhteshim Agan of North America, Inc.
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604
1-919-256-9300

Emergency Telephone Number

Emergency Telephone (24 hr) For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Amber liquid

Physical State Liquid

Odor Characteristic

Classification

Acute toxicity – Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Skin sensitization	Category 1

Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

Signal Word

Warning

Hazard Statements

Harmful if inhaled
 Causes skin irritation



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/mist
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash it before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Call a poison center/doctor if you feel unwell

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Dicofol	115-32-2	42.89 - 45.53

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice.
Skin Contact	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek medical advice.

Ingestion Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.

Most important symptoms and effects

Symptoms Will irritate mucous membranes. May cause skin redness, irritation or swelling. Chronic: Prolonged or repeated exposure to Dicofol can cause liver adrenal, kidney, or heart damage. Overexposure by any route to chlorinated hydrocarbons may cause nervousness and hyperactivity, headache, nausea, vomiting, unusual sensations, and fatigue. Convulsions and coma may follow.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog). Dry chemical. Carbon dioxide (CO2).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Pesticide particulates can become airborne.

Hazardous Combustion Products Hydrogen chloride. Chlorine gas. Toxic fumes may be released.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up For small spills, absorb with sand, clay, or other inert absorbent. Place in appropriate containers for disposal. For large spills: recover free product. Dike for later disposal. Absorb with inert material, and then place in suitable container for chemical waste.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Protect from excessive heat. Store locked up. Do not store at temperatures below 0°C (32°F) or above 43°C (110°F).

Incompatible Materials

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls

Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Use splash goggles or face shield when contact may occur.

Skin and Body Protection

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.

Respiratory Protection

Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

General Hygiene Considerations

Wash hands before eating, drinking, smoking and using the toilet. Remove contaminated clothing promptly and wash thoroughly before reused.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Characteristic
Appearance	Amber liquid	Odor Threshold	Not determined
Color	Amber		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	3.85	
Melting Point/Freezing Point	Not applicable	
Boiling Point/Boiling Range	Not determined	
Flash Point	105 °C / 222 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-not applicable	

Upper Flammability Limits	Not applicable
Lower Flammability Limit	Not applicable
Vapor Pressure	Not established
Vapor Density	Not determined
Specific Gravity	1.103 @ 22°C
Water Solubility	Not determined
Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	79.5 mm ² /s
Explosive Properties	Not determined
Oxidizing Properties	Not determined
Bulk Density	1.103 gm/ml (relative density)

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Not known to occur.

Conditions to Avoid

Elevated temperatures.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

Hydrogen chloride. Chlorine gas. Toxic fumes may be released.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	Causes skin irritation. May be harmful in contact with skin.
Inhalation	Harmful if inhaled.
Ingestion	Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Dicofol 115-32-2	= 575 mg/kg (Rat)	> 5000 mg/kg (Rat) = 1870 mg/kg (Rabbit)	> 5000 mg/L (Rat) 4 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Dicofol 115-32-2		Group 3		

*IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"*

Product Information (Numerical measures of toxicity)

Acute Oral LD50 (Rat): >5,000 mg/kg
Acute Dermal LD50 (Rabbit): >5,000 mg/kg
Acute Inhalation LC50 (Rat): >2.10 mg/L (4-hr)
Eye Irritation: Mildly irritating.
Dermal Irritation: Moderately irritating.
Dermal Sensitization: Not a skin sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects. This pesticide is toxic to fish and wildlife. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below mean high water mark. Do not contaminate water when disposing of equipment or washwaters. This chemical can contaminate surface water through drift from spray application.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Dicofol 115-32-2	0.073: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	0.488 - 0.533: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 0.42 - 0.64: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.51: 96 h <i>Lepomis macrochirus</i> mg/L LC50 0.095 - 0.180: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through	EC50 = 0.445 mg/L 5 min	0.14: 48 h <i>Daphnia magna</i> mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Dicofol 115-32-2	4.28

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinse is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA regional office. Never place any unused product down an indoor or outdoor drain. Do not contaminate water, food or feed by disposal.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

UN/ID No UN3082
 Proper Shipping Name Environmentally Hazardous Substances, Liquid, N.O.S. (Dicofol 42%)
 Hazard Class 9
 Packing Group III
 Reportable Quantity (RQ) 10 lb

IATA

UN/ID No UN3082
 Proper Shipping Name Environmentally Hazardous Substances, Liquid, N.O.S. (Dicofol 42%)
 Hazard Class 9
 Packing Group III
 Marine Pollutant Yes

IMDG

UN/ID No UN3082
 Proper Shipping Name Environmentally Hazardous Substances, Liquid, N.O.S. (Dicofol 42%)
 Hazard Class 9
 Packing Group III
 Marine Pollutant Yes

15. REGULATORY INFORMATION

International Inventories

TSCA All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Dicofol 115-32-2	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Dicofol - 115-32-2	115-32-2	42.89 - 45.53	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Dicofol 115-32-2 (42.89 - 45.53)	10 lb			X

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Dicofol 115-32-2	X	X	X

EPA Pesticide Registration Number 66222-56

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Signal Word: Caution

Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Caution	Warning
Acute toxicity - Oral	Harmful if swallowed	N/A
Acute toxicity – Inhalation	N/A	Harmful if inhaled
Acute toxicity - Dermal	Harmful if absorbed through the skin	May be harmful in contact with skin
Skin corrosion/irritation	N/A	Causes skin irritation
Serious eye damage/eye irritation	Causes moderate eye irritation	N/A
Skin sensitization	Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.	N/A

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	2	1	0	None
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	2	1	0	See section 8

Issue Date: 26-Aug-2008
Revision Date: 26-Oct-2015
Revision Note: Updated format from 02-Jun-2014

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet