

# MATERIAL SAFETY DATA SHEET

NAME OF MATERIAL/PREPARATION

**METAREX**

Date of Preparation	28/07/2015
Date of Issue	28/07/2015
MSDS No	FORM_MSDS_R&D_241_00
Renewal Date/No	

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PREPARED BASED ON REGULATION ON PREPARATION AND DISTRIBUTION OF SAFETY DATA SHEETS ABOUT HAZARDOUS MATERIALS AND PREPARATIONS (O.G. issue no 27092 dated 26/12/2008).

## 1. MATERIAL/PREPARATION AND COMPANY/OWNER IDENTIFICATION:

### 1.1 Material/Preparation Identification:

**Product Name** : **METAREX**  
**Product Content** : Dimethomorf+Mancozeb %9+60  
**Formulation Form** : WP (WETTABLE POWDER)

#### Dimethomorf:

**Cas No** : 110488-70-5  
**EC No** : 404-200-2  
**FRAC** : 40, F5 cinnamic acid amide

#### Mancozeb:

**Cas No** : 8018-01-7  
**EC No** : 006-076-00-1  
**FRAC** : M3, M multi-site: alkylenebis(dithiocarbamate)

### 1.2 Usage of the Material/Preparation:

Fungicide

### 1.3 Company Identification:

#### Manufacturing and License Holding Company:

**Company Name** : AGRI SCIENCES TARIM VE ILAC UR. SAN. TIC. LTD. STI.  
**Address** : Bekir Saydam Caddesi Pancar No: 31 Torbali / IZMIR  
**Telephone** : +90 0232 864 13 33  
**Fax** : +90 0232 864 16 79

### 1.4 Emergency Contact Telephone:

In case of an emergency please call +90 0232 864 13 33

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## 2. COMPOSITION AND INFORMATION ON INGREDIENTS

Material	%	CAS No	EINECS/ELINCS	Hazard	R <sup>1</sup>	Classification
Mancozeb	60	8018-01-7	006-076-00-1	Repr. Cat. 3, Xi, N	R37, R43, R63, R50	Xn; R37, R43, Repr. Cat. 3; R63, N; R50
Dimethomorf	9	110488-70-5	404-200-2	N	R51-53	N; R51-53
Others	Out of classification due to the fact that it does not include hazardous material.					

- <sup>1</sup> R explanations are under section 16.

## 3. HAZARD IDENTIFICATION



**Xn: Harmful**



**N: DANGEROUS FOR THE ENVIRONMENT**

R37 - Irritating to respiratory system.

R43 - May cause sensitisation by skin contact.

R 50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63 - Possible risk of harm to the unborn child.

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#### 4. FIRST AID MEASURES

**Poisoning Symptoms:** May cause rash in the eyes and on the skin.

**First Aid Measures:** In case of poisoning please stop working and contact with a doctor. In case of contact with skin or eyes, wash with plenty of water. In case contact with eye, wash with plenty of water minimum 10 minutes. In case inhale, remove the patient to fresh air. If swallowed, give medical coal with plenty of water. If swallowed large amount of concentrated medicine, call for medical assistance. Note: Do not give anything by mouth to unconscious patients.

**Antidote And Essential Information:** There is no specific antidote and treatment according to symptoms.

#### 5. FIRE FIGHTING MEASURES

**Personal Protective Equipment for Fire-fighting:** Do not inhale the fumes occurred during the explosion and fire. If available, use self-contained respiratory device during the fire.

**Dangers:** Formation of hazardous gases during the fire must be considered.

**Extinguishers:** Foam, carbon dioxide, fire extinguishing powder.

**Other Information:** Move the product away from the fire area and cool the containers with water. If possible, use sand or soil after fire extinguishing water

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## 6. ACCIDENTAL RELEASE MEASURES

**General Information:** Please use the personal protection equipment defined under Section 8.

**Personal Precautions:** Do not touch spilled product or contaminated surfaces. While handling with spilled product, do not eat, drink and smoke.

**Clean-up Methods:** Spilled material is collected with dust holder materials or suitable vacuum cleaner. Collect the material in tight plastic containers and keep safely until it is disposed.

**Additional Measures:** Look section 7 for safe use, section 8 for personal protective equipment. Look section 13 for disposal.

## 7. HANDLING AND STORAGE

**Handling:** Use the personal protective equipment stated in Section 8. Do not eat or drink while using. Prevent the contact with mouth, skin and eyes. Do not inhale. Wash your hands after using. Other security precautions are not required except of stated warnings during using the closed package. Use only in rooms, in which there is a locally aspirated device.

**Storage:** Store in the original container in dry, cool and well-ventilated places. Keep away from food, drink and animal feeds. Protect against direct sun light. Keep in the places where children cannot reach.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Precautions:** Ensure appropriate general or local ventilation to keep the product concentration under allowed limits.

### Personal Protection Equipment:

**Eye** : Use eye protection equipment compliant with EN 166.

**Skin** : Use protective clothing and appropriate gloves. Use 2 layers of clothing, if possible. Use CE marked Nitrile Rubber (min. 0.40 mm thick). Contaminated gloves should be washed. Any gloves that cannot be cleaned inside and outside should be disposed.

**Respiratory** : Use respiratory apparatus compliant with EN 149:2001. Any respiratory protection apparatus should only be used for short term operations, as a part of risk minimization measures, e.g. in case of local ventilation. Comply with operation instructions and warnings of the manufacturer during use of respiratory protection apparatuses.

**Hygiene Measures:** Do not eat, drink or smoke while handling the product. Wash your hands each time before eating, drinking, smoking or going to the toilet

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** : Solid, powder

**Color** : Yellow

**Bulk density** : 0,37 kg/m<sup>3</sup>

**pH** : 5-9 (%1 solution)

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### 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal use and storage conditions.

**Conditions to be avoided:** Extreme temperatures and direct sun light

**Hazardous reactions :** When stored and handled appropriately no hazardous reactions are observed.

**Hazardous decomposition materials:** Toxic and irritant gases can be ocured by heating and thermal decomposition.

### 11. TOXICOLOGICAL INFORMATION

#### **Dimethomorf Technical Material:**

**Oral** Acute oral LD<sub>50</sub> for rats 3900 (*E,Z*)-, >5000 (*Z*)-, 4472 (*E*)- mg/kg b.w.

**Skin and eye** Acute percutaneous LD<sub>50</sub> for rats >2000 mg/kg b.w. Not irritant to skin or eyes of rabbits. Not a skin sensitiser (guinea pigs, M&K test).

**Inhalation** LC<sub>50</sub> (4 h) for rats >4.2 mg/l air (maximum attainable concentration).

**NOEL** (2 y) for rats 200 mg/kg diet (9 mg/kg b.w. daily); (1 y) for dogs 450 mg/kg diet (15 mg/kg daily). Non-oncogenic in 2 y studies in rats and mice.

**Toxicity Class** WHO (a.i.) U; EPA (formulation) III ('Acrobat MZ')

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## **Mancozeb Technical Material:**

**Oral** Acute oral LD<sub>50</sub> for rats >5000 mg/kg.

**Skin and eye** Acute percutaneous LD<sub>50</sub> for rats >10 000, rabbits >5000 mg/kg. No irritation to skin (rabbits); eye irritation Category III (EPA classification). No dermal sensitisation in Buehler test; may cause dermal sensitisation in guinea pig maximisation test.

**Inhalation** LC<sub>50</sub> (4 h) for rats >5.14 mg/l.

**NOEL** Chronic NOAEL (2 y) for rats 4.8 mg/kg b.w. daily. Ethylenethiourea chronic NOAEL (2 y) for rats 0.37 mg/kg b.w. daily. Below parentally toxic levels, mancozeb was observed to have no effect on reproduction, on neonatal survival, or on growth or development.

**Toxicity Class** WHO (a.i.) U; EPA (formulation) IV

## **12. ECOLOGICAL INFORMATION**

### **Dimethomorf Technical Material:**

**Birds** Acute oral LD<sub>50</sub> for mallard ducks and northern bobwhite quail >2000 mg/kg. Dietary LC<sub>50</sub> (5 d) for bobwhite quail >5200 ppm.

**Fish** LC<sub>50</sub> (96 h, static) for bluegill sunfish >25, carp 14, rainbow trout 6.2 mg/l.

**Daphnia** EC<sub>50</sub> (48 h, static) >10.6 mg/l.

**Algae** EC<sub>50</sub> (96 h) for *Scenedesmus subspicatus* 29.2 mg/l.

**Bees** LD<sub>50</sub> (48 h) (oral) >32.4 µg/bee; (contact) >102 µg/bee.

**Worms** EC<sub>50</sub> for earthworms >1000 mg/kg soil.

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## **Mancozeb Technical Material:**

**Birds** Acute oral LD<sub>50</sub> (10 d) for mallard ducks >5500, Japanese quail 5500, English sparrows (*Passer domesticus*) >1290, European starlings (*Sturnus vulgaris*) >2400 mg/kg. Acute dietary LC<sub>50</sub> (8 d) for bobwhite quail and mallard ducks >5200 mg/kg diet. Chronic reproduction NOEL for mallard ducks 125, bobwhite quail 300 mg/kg diet.

**Fish** LC<sub>50</sub> (96 h, flow-through) for rainbow trout 1.0, bluegill sunfish >3.6 mg/l. NOEC (34 d, early life-stage) for fathead minnows 0.022 mg/l; extended growth NOEC (14 d) for rainbow trout 0.66 mg/l.

**Daphnia** EC<sub>50</sub> (48 h, flow-through) 3.8 mg/l.

**Algae** EC<sub>50</sub> (120 h, cell density) for *Selenastrum capricornutum* 0.044 mg/l.

**Other aquatic spp.** EC<sub>50</sub> (24 h) for rotifers (*Brachionus calyciflorus*) 0.11 mg/l; LC<sub>50</sub> (48 h) for snails (*Lymnaea stagnalis*) >113, amphipods (*Gammarus* sp.) 3.0, isopods (*Asellus* sp.) 4.4 mg/l. Outdoor mesocosm (11 w, macroinvertebrates and phytoplankton communities), after 8 applications, EAC 0.032 mg/l.

**Bees** LD<sub>50</sub> (oral) >209 µg/bee; (contact) >400 µg/bee.

**Worms** LC<sub>50</sub> (14 d) for *Eisenia foetida* >1000 mg/kg soil; (56 d) reproduction NOEC for *Eisenia foetida* 20 mg/kg soil.



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## 13. DISPOSAL INFORMATION

**Product** : Do not dispose of the wastes with household wastes. Do not pour the remaining wastes to the sewage system. Dispose of them according to the Directive of Hazardous Waste Control.

**Contaminated Materials:** Do not use the empty packages for other products. Dispose the fully-discharged and shook packages in due form. Dispose of the non-cleaned packages as hazardous waste.

## 14. TRANSPORTATION INFORMATION

### ADR/RID/ADNR

**UN-No.** :3077

**Hazard Mark** : 9

**Packing Group** : III

**Product type** : UN 3077 Environmental hazardous substance, solid, N.O.S. (waste free) (CONTAINS DIMETHOMORF and MANCOZEB)



### IMDG

**UN-No.** : 3077

**Class** : 9

**Packing Group** : III

**Marine Pollutant** : Yes

**Product type** : UN 3077 Environmental hazardous substance, solid, N.O.S. (waste free) (CONTAINS DIMETHOMORF and MANCOZEB)

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## IATA

**UN-No.** : 3077

**Class** : 9

**Packing Group** : III

**Product type** : UN 3077 Environmental hazardous substance, solid, N.O.S.  
(waste free) (CONTAINS DIMETHOMORF and MANCOZEB)

## 15. REGULATORY INFORMATION

This data sheet is prepared based on regulation on preparation and distribution of safety data sheets about hazardous materials and preparations (O.G. issue no 27092 dated 26/12/2008).

### Hazard Marks and Symbols:



**Xn: Harmful**



**N: Dangerous For The Environment**

### Hazardous Materials Listed on the Label:

Contains Dimethomorf and Mancozeb

### Risk Phrases:

**Physicochemical:** -

**Health:**

R37 - Irritating to respiratory system.

R43 - May cause sensitization by skin contact.

R63 - Possible risk of harm to the unborn child.

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### Environment

R50 - Very toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

### Safety Phrases:

S1/2 - Lock it up and keep out of the reach of children.

S 9 - Keep container in a well-ventilated place

S 13 - Keep away from food, drink and animal feedingstuffs

S 20 - When using do not eat or drink

S 24 - Avoid contact with skin

S29 Do not empty into drains

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S 46 - If swallowed, seek medical advice immediately and show this container or label

S56 Dispose of this material and its container at hazardous or special waste collection point

S 64 - If swallowed, rinse mouth with water (only if the person is conscious)

### Important Labeling:

Follow instructions to avoid personal and environmental risks

## 16. OTHER INFORMATION

**N:** Dangerous For The Environment

**Xn:** Harmful

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### All Risk Phrases under Section 2:

R37 - Irritating to respiratory system.

R43 - May cause sensitisation by skin contact.

R63 - Possible risk of harm to the unborn child.

R50 - Very toxic to aquatic organisms.

R51 - Toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

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**Prepared By** : Remzican KARAN

This material safety data sheet is provided as a supplement to instructions of manufacturer; however it does not replace instructions of manufacturer. The information provided in this sheet only conforms to the regulatory criteria known at the time of the preparation of Safety Data Sheet. Required data are gathered in accord with "Regulation on Preparation and Distribution of Safety Data Sheets about Hazardous Materials and preparations (O.G. issue no 27092 dated 26/12/2008)". Concerned organizations and persons are invited to comply with the abovementioned regulation.