

**DuPont™ Manzate® Pro-Stick™ Fungicide**

Version 2.0

Revision Date 02/02/2011

Ref. 130000036272

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DuPont™ Manzate® Pro-Stick™ Fungicide  
Tradename/Synonym : Manzate 75DF  
Manzate 75WG  
Manzate 200DF  
Manzate 200WG  
Manzate Evolution  
Manzate GRDA  
Innova Mancozeb 750  
DPX-O7331 75WG  
Dithane DG 75  
Dithane 75 DF Rainshield  
DUKAT 75WG  
MANSCIENCE 75DF  
M70 DF  
Mancozeb: (A coordination product of zinc ion and manganese ethylenebisdithiocarbamate)

MSDS Number : 130000036272

Product Use : Fungicide

Manufacturer : DuPont  
1007 Market Street  
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)  
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION**

## Emergency Overview

**CAUTION!**

May irritate eyes, nose, throat or skin. Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing.

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This product is toxic to: Fish

**Potential Health Effects**

This section includes potential acute adverse effects which could occur if this material is not used according to the label.

**Skin**

Mancozeb : May cause allergic skin reaction.

**Eyes**

Mancozeb : May irritate eyes.

**Inhalation**

Mancozeb : Causes respiratory tract irritation.

**Target Organs**

Mancozeb : Thyroid

**Carcinogenicity**

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Mancozeb	8018-01-7	75 %
Other Ingredients		25 %

**SECTION 4. FIRST AID MEASURES**

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- Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- Inhalation : Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
- Ingestion : Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not give anything by mouth to an unconscious person.
- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.  
For medical emergencies involving this product, call toll free 1-800-441-3637.  
See Label for Additional Precautions and Directions for Use.

**SECTION 5. FIRE-FIGHTING MEASURES**

## Flammable Properties

- Flash point : not applicable
- Ignition temperature : 205 °C (401 °F)
- Lower explosion limit : 0.29 g/l
- Fire and Explosion Hazard : Hazardous combustion products may include: Sulphur oxides nitrogen oxides  
Carbon oxides
- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)



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Firefighting Instructions : Wear full protective clothing and self-contained breathing apparatus. (on 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. Cool containers / tanks with water spray.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.

Spill Cleanup : Remove all sources of ignition. Prevent further leakage or spillage. Shovel or sweep up. Scoop into bags or boxes with plastic or aluminium shovel. Never return to container for reuse.

Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas. Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

**SECTION 7. HANDLING AND STORAGE**

Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Handling (Physical Aspects) : Under severe dusting conditions, this material may form explosive mixtures in air. Keep away from heat and sources of ignition.

Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Never allow product to become wet during storage. This may lead to chemical changes which will reduce the effectiveness of the product and create vapors which may be flammable. Keep container closed when not in use. Store product in original container only, away from other pesticides, fertilizer, food or feed. Keep out of the reach of children.



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Do not store near acids.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering controls : Ensure adequate ventilation.

Personal protective equipment

Skin and body protection : Applicators and other handlers (other than mixers and loaders) must wear:  
 Coveralls worn over long-sleeved shirt and long pants  
 Chemical-resistant gloves  
 Shoes plus socks  
 Mixer and loaders must wear:  
 Coveralls worn over long-sleeved shirt and long pants  
 Chemical-resistant gloves  
 Shoes plus socks  
 Protective eyewear  
 Chemical resistant apron when mixing or loading  
 Refer to the product label for PPE requirements for early entry.

Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Exposure Guidelines

Exposure Limit Values

Mancozeb

PEL:	(OSHA)	5 mg/m3	TLV-C as Mn
AEL *	(DUPONT)	2 mg/m3	8 hr. TWA Total dust.
AEL *	(DUPONT)	1 mg/m3	12 hr. TWA Total dust.

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.


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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: dry, free flowing, water dispersible granules, solid
Color	: yellow
Odor	: sulphurous
pH	: 7.0 at 10 g/l
Bulk density	: 640 kg/m <sup>3</sup>
Water solubility	: dispersible

**SECTION 10. STABILITY AND REACTIVITY**

Stability	: Stable at normal temperatures and storage conditions.
Conditions to avoid	: Exposure to moisture.
Incompatibility	: Incompatible with acids.
Hazardous decomposition products	: Decomposes with heat. Hazardous gases or vapors may be released during decomposition. Sulphur compounds, Sulphur oxides, nitrogen oxides (NO <sub>x</sub> ), Carbon oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**

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Inhalation 4 h LC50	: > 5.4 mg/l , rat
Dermal LD50	: > 2,000 mg/kg , rabbit
Oral LD50	: > 5,000 mg/kg , rat
Skin irritation	: slight irritation, rabbit
Eye irritation	: Moderate eye irritation, rabbit
Sensitisation	: Causes sensitization., guinea pig

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Repeated dose toxicity	:
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The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Inhalation  
rat  
Thyroid effects

Oral - feed  
rat  
Thyroid effects

Oral - feed  
dog  
Thyroid effects

**Carcinogenicity** : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

An increased incidence of tumours was observed in laboratory animals.

**Mutagenicity** : Did not cause genetic damage in cultured bacterial cells.  
Evidence suggests this substance does not cause genetic damage in cultured mammalian cells.  
Evidence suggests this substance does not cause genetic damage in animals.

**Reproductive toxicity** : Animal testing showed no reproductive toxicity.

**Teratogenicity** : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

**SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity  
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96 h LC50 : Oncorhynchus mykiss (rainbow trout) 0.073 mg/l


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48 h ErC50 : Pseudokirchneriella subcapitata (green algae) 0.43 mg/l

48 h EC50 : Daphnia magna (Water flea) 0.073 mg/l

34 d : NOEC Cyprinodon sp. (minnow) 0.00219 mg/l

21 d : NOEC Daphnia magna (Water flea) 0.0073 mg/l

Additional ecological information : Environmental Hazards: This product is toxic to fish. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. See product label for additional application instructions relating to environmental precautions.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal : Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Disposal : Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14. TRANSPORT INFORMATION**

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Mancozeb)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077



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Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(Mancozeb)  
Class : 9  
Packing group : III  
Labelling No. : 9  
Marine pollutant : yes (Mancozeb)

Not regulated by DOT/49 CFR unless shipped in bulk package or by water.

**SECTION 15. REGULATORY INFORMATION**

SARA 313 Regulated Chemical(s) : Mancozeb

Title III hazard classification : Acute Health Hazard: Yes  
Chronic Health Hazard: Yes  
Fire: No  
Reactivity/Physical hazard: Yes  
Pressure: No

EPA Reg. No. : 352-704  
In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer. Mancozeb, Ethylene thiourea  
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Ethylene thiourea

**SECTION 16. OTHER INFORMATION**



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	NFPA	HMIS
Health :	1	2
Flammability :	1	1
Reactivity/Physical hazard :	1	1

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Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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