

SAFETY DATA SHEET

17/10/05

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Dow AgroSciences Limited

Latchmore Court
Brand Street
Hitchin
Herts SG5 1NH

Emergency Telephone Number: +44(0)1553 761 251

Product Name: **CROSSFIRE 480 INSECTICIDE : MAPP 12516 (PCS 92050)**

LV70: 10327

Issue Date: Aug. 01

Ref: HEW19

Revised: June 04 (Section(s) 3, 5, 8, 12 & 15)

2. COMPOSITION/INFORMATION ON INGREDIENTS**Dangerous components (see section 16 for complete R-phrases):**

			CAS	EC No
Chlorpyrifos	44.53 %	T; R25, N; R50/53	002921-88-2	220-864-4
Aromatic hydrocarbon solvent	1-5 %	Xn; R65, N; R51/53, R66-67	064742-94-5	265-198-5
Aromatic hydrocarbon solvent	40-50 %	Xn,N; R10-37- 51/53-65-66-67	064742-95-6	265-199-0
Calcium dodecylbenzenesulphonate	1-5 %	Xi; R38-41	26264-06-2	247-557-8
Inert ingredients	Balance			
Composition Code	EF1551			

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

3. HAZARDS IDENTIFICATION

Flammable. Harmful by inhalation and if swallowed. Irritating to eyes, respiratory system and skin. Harmful: may cause lung damage if swallowed. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Ingestion

Do not induce vomiting. Call a physician and/or transport to emergency facility immediately. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact

Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

This material contains both a cholinesterase inhibitor and a solvent. Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PA M/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Supportive care. Treatment based on judgement of physician in response to symptoms of patient.

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Water fog or fine spray. Carbon dioxide. Dry chemical powder. Foam.

Hazardous Combustion Products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/ or irritating.

Combustion products include: Hydrogen chloride. Sulphur oxides. Nitrogen oxides.

Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

Additional Information

Rapid decomposition occurs above 160 deg.C. Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear appropriate safety clothing and eye/face protection (see Section 8).

Environmental Precautions

Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.

Methods of Cleaning Up

Soak up with sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. If further assistance is required, telephone the emergency contact number.

Additional Information

Eliminate all ignition sources.

7. HANDLING AND STORAGE

Handling

Use good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work. Avoid eye and skin contact.

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

Storage

Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chlorpyrifos: Dow AgroSciences IHG is 0.1 mg/m³ (skin).

Engineering Controls

Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Respiratory Protection

When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator.

For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hand/Skin Protection

For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Nitrile. Polyvinyl chloride ("PVC" or "vinyl"). Neoprene.

Avoid gloves made of: Natural rubber ("latex").

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation.

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

Eye/Face Protection

Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: clear liquid
Colour	: pale yellow
Rel. density (water=1)	: 1.07 g/cm ³ (approx.)
Water solubility	: emulsifiable
Flash point	: 53.5 deg.C (PMCC)
Explosive properties	: not explosive
Surface tension	: 30.5 mN/m (25 deg.C)
Oxidising properties	: non-oxidising
Autoflammability	: >400 deg.C (EEC: A15 METHOD)
pH	: 7.0 (1% aq. sol.)
Kinematic viscosity	: 2.22 mm ² /s (40 deg.C)

10. STABILITY AND REACTIVITY**Chemical Stability**

Is stable under normal storage conditions.

Conditions to Avoid

Avoid extremes of temperature. Chlorpyrifos: Rapid decomposition occurs above 160 deg.C. Product undergoes exothermic decomposition which can lead to high temperatures and violent decomposition if heat developed is not removed.

Materials to Avoid

Strong basic, acidic or oxidising materials.

Hazardous Decomposition Products

None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION**Ingestion**

Moderate toxicity if swallowed. The oral LD50 for rats is 300<500 mg/kg.

Skin Contact

The dermal LD50 for rats is >2000mg/kg. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Short single exposure may cause skin irritation.

Sensitisation

Non-sensitising to guinea pig skin.

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

Eye Contact

May cause moderate eye irritation.

Inhalation

Harmful by inhalation. No adverse effects anticipated by this route of exposure incidental to proper handling.

Other Information

Excessive exposure may cause organophosphate type cholinesterase inhibition.

Components: Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION**Persistence and Degradability**

Assessment largely or completely based on data for active ingredient. Does not leach in soils and is therefore unlikely to contaminate ground water. Half-life in soils is dependent on soil type and conditions and is approximately 2-34 days.

Aquatic Toxicity

Based on data for similar formulation.

Material is very toxic to fish on an acute basis (LC50<1mg/L).

Material is very toxic to aquatic invertebrates on an acute basis (EC50<1mg/L).

Material is toxic to algae (1mg/l < IC50 <10 mg/l).

Avian Toxicity

Based on data for similar formulation.

Material is slightly toxic to birds on an acute basis (500mg/kg <LD50 <2000mg/kg).

Other Information

Based on data for similar formulation.

Highly toxic to bees. LD50 for earthworms is 313mg/kg.

13. DISPOSAL CONSIDERATIONS

Very toxic to aquatic organisms. Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators. Do not re-use container for any purpose.

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

14. TRANSPORT INFORMATION

Road & Rail

Proper shipping name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE,
(Chlorpyrifos 45% and Aromatic Hydrocarbon)

Truck/Rail ADR/RID : 6.1 Label : 6.1 + 3

Classification Code : TF2

Packing Group : III

Kemler Code : 63 UN Number : 3017

Tremcard Nr. CEFIC : 61GTF2III

Sea

Proper shipping name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE,
(Chlorpyrifos 45% and Aromatic Hydrocarbon)

Sea - IMO/IMDG Class: 6.1 UN Nr : 3017 Label: 6 + 3

Packing Group : III EMS : 6.1-01

Marine Pollutant : Y (Y/N)

Air

Proper shipping name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE,
(Chlorpyrifos and Aromatic Hydrocarbon)

Air-ICAO/IATA Class : 6.1 UN Nr : 3017 Label: 6.1 + 3

Sub Class : 3

Packing Group : III Pack Instr. Passenger : 611

Pack Instr. Cargo : 618

Remarks : Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

Hazard Symbol : Xn - Harmful
N - Dangerous for the Environment

Risk Phrases : Flammable (R10).
Harmful by inhalation and if swallowed (R20/22).
Irritating to eyes, respiratory system and skin
(R36/37/38).
Very toxic to aquatic organisms, may cause long-term
adverse effects in the aquatic environment (R50/53).
Harmful: may cause lung damage if swallowed (R65).

SAFETY DATA SHEET

17/10/05

CROSSFIRE 480 INSECTICIDE: MAPP 12516

Safety Phrases : Keep out of reach of children (S2).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26).
This material and its container must be disposed of in a safe way (S35).
Wear suitable protective clothing (S36).
Use appropriate containment to avoid environmental contamination (S57).
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label (S62).

Refer to the Product Label for full local Regulatory Authority label precautions.

16. OTHER INFORMATION

Risk-phrases in Section 2

R10 - Flammable.
R25 - Toxic if swallowed.
R37 - Irritating to respiratory system.
R38 - Irritating to skin.
R41 - Risk of serious damage to eyes.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: may cause lung damage if swallowed.
R66 - Repeated exposure may cause skin dryness or cracking.
R67 - Vapours may cause drowsiness and dizziness.

The information herein is given in good faith and to the best of our knowledge but no warranty, express or implied is made.