

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Product name. : Mocap 15G
Product code : AV 040 1141
Type of formulation : Granule (GR)
Active Ingredient : Ethoprophos

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Plant protection product for professional use. Agriculture.
Use of the substance/mixture : Insecticide. Acaricide.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheetSupplier:

AMVAC CHEMICAL UK LIMITED
Surrey Technology Centre, 40 Occam Road
The Surrey Research Park , Guildford, Surrey, GU2 7YG
United Kingdom

Distributor:

CERTIS UK
1 Riverside
Granta Park
Great Abington
Cambridgeshire CB21 6AD
United Kingdom
Tel: +44 (0)845 373 0305
Fax: +44 (0)1223 891210
Email: certis@certiseurope.co.uk
Website: www.certiseurope.co.uk

1.4. Emergency telephone number

Emergency number : Certis Carechem24 multilingual 24 hours emergency number: +44 (0) 870 190 6777.
For advice on medical emergencies, fires, spillages or chemical hazards only –phone: 0870 190 6777.
For further advice for medical professionals - The National Poisons Information Service:
Tel: 0870 600 6266 (UK only) or Dublin Tel: 0035 3 137 99 64/379966.
For further advice for veterinary surgeons: 020 7635 9195.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

T+; R27

T;R25

R43

N; R51/53

RSh1

Full text of R-phrases: see section 16.

2.2. Label elements

Labelling according to Directive 67/548/EEC or 1999/45/EC

Hazard symbols

:



T+ - Very toxic



N - Dangerous for the environment

R-phrases

:

R25 - Toxic if swallowed.

R27 - Very toxic in contact with skin.

R43 - May cause sensitisation by skin contact.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

RSh 1 - Toxic by eye contact.

S-phrases

:

S24 - Avoid contact with skin.

S28 - After contact with skin, wash immediately with plenty of water.

S35 - This material and its container must be disposed of in a safe way.

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

S45 - In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

S57 - Use appropriate containment to avoid environmental contamination.

2.3. Other hazards

Product contains a cholinesterase inhibitor. Do not use if under medical advice not to work with such compounds..

SIGNS OF ACUTE OVEREXPOSURE: Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhoea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur. Due to the presence of the solvent ingestion or inhalation may produce central nervous system (CNS) depression. Ingestion of the solvent may result in vomiting. Aspiration (breathing) of the vomit into the lungs must be avoided as even small quantities may result in aspiration pneumonitis (pneumonia).

SIGNS OF CHRONIC OVEREXPOSURE: Repeated exposures to small doses of cholinesterase inhibitors may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed. In addition, there is evidence that chronic exposure to the solvent may cause central nervous system and congestive effects to a wide variety of internal organs.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Ethoprophos	(CAS No.) 13194-48-4 (EC no) 236-152-1 (EC index no) 015-107-00-8	15	T+; R26/27 T; R25 Xi; R43 N; R50/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethoprophos	(CAS No.) 13194-48-4 (EC no) 236-152-1 (EC index no) 015-107-00-8	15	Acute Tox. 2 (Inhalation), H330 Acute Tox. 1 (Dermal), H310 Acute Tox. 3 (Oral), H301 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : MOCAP G may be fatal if absorbed through the skin or is inhaled. Medical advice should be sought in all cases of exposure. Product contains a cholinesterase inhibitor and pre-existing medical conditions may be aggravated.
- In case of an accident or if you feel unwell, seek medical advice immediately (show the label when possible). In the event of any complaints or symptoms, avoid further exposure.
- First-aid measures after inhalation : Remove the affected person from dangerous area to somewhere well ventilated with fresh air. Keep the victim warm.
- If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : IF ON SKIN: Immediately remove all contaminated clothing and flush all affected areas with large amounts of clear tepid water. Wash skin thoroughly with soap and water. Wash clothing before reuse. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after eye contact : IF IN EYES: Rinse immediately with plenty of tepid water. After 1 - 2 initial minutes remove contact lenses if present (if easily possible). Continue rinsing. Consult an eye specialist.
- First-aid measures after ingestion : IF SWALLOWED: Wash out mouth with water. Allow the victim to rest and keep them warm. Only induce vomiting when 1) the patient is fully conscious; 2) medical help is not readily available; 3) a large amount is swallowed (more than a mouthful) and 4) the time from ingestion is less than 1 hour (vomit should not reach the respiratory tract).
- Immediately call a POISON CENTER or doctor/physician. (show the product container, the label or this safety sheet where possible).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Cholinesterase inhibition symptoms: Gastrointestinal complaints. Narrowing of the respiratory passages. Bradycardia. Dyspnoea. Miosis. Clonic convulsions.

SIGNS OF ACUTE OVEREXPOSURE: Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhoea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur. Due to the presence of the solvent ingestion or inhalation may produce central nervous system (CNS) depression. Ingestion of the solvent may result in vomiting. Aspiration (breathing) of the vomit into the lungs must be avoided as even small quantities may result in aspiration pneumonitis (pneumonia).

SIGNS OF CHRONIC OVEREXPOSURE: Repeated exposures to small doses of cholinesterase inhibitors may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed. In addition, there is evidence that chronic exposure to the solvent may cause central nervous system and congestive effects to a wide variety of internal organs.

4.3. Indication of any immediate medical attention and special treatment needed

Monitoring of respiratory, cardiac and central nervous system.

Endotracheal intubation and gastric lavage, followed by administration of charcoal.

Artificial respiration and/or oxygen may be necessary.

Elimination by dialysis (forced alkaline diuresis).

Observe specific parameters: red blood cell and plasma cholinesterase.

Against convulsions: give diazepam. For adults 5-10 mg intravenously as necessary until fully sedated; for children 2.5 mg i.v.

Treatment: a high dose of atropine (1 to 4 mg for adults) repeated as needed. In association, if possible, with Contrathion (Pralidoxime) (1g intravenously for adults) repeated after 10 to 12 h.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder.

Alcohol resistant foam.

Carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustion or thermal decomposition will generate toxic vapours:
Chlorine compounds. Nitrogen oxides. Carbon monoxide. Hydrocarbons. Oxides of phosphorus

Reactivity : The product is stable at normal handling- and storage conditions.

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Fight fire from safe distance and protected location. Do not breathe fumes. Cool closed containers exposed to fire with water spray. If possible, take the containers out of dangerous zone. Contain fire-fighting water with dikes or absorbents to prevent migration and entry into sewers or streams. Do not discharge extinguishing waters into the environment. Contact with the fumes and vapours should be avoided by staying upwind and by wearing impervious clothing and positive pressure self-contained breathing apparatus with a full face shield.
Protection during firefighting	: Wear suitable protective clothing, gloves, eye/face protection and respiratory protection. Wear a self-contained breathing apparatus.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedure**

Protective equipment	: Wear suitable protective clothing, gloves and eye or face protection.
Emergency procedures	: Evacuate area. Ensure adequate ventilation. Avoid direct contact with the substance. Avoid contact with skin and eyes. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Keep public and animals away from danger area.

6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects. Prevent dispersion. Do not contaminate surface water, groundwater and wells. Make provisions to collect extinguishing water after fires. Notify the authorities if product enters sewers or public waters. UK: Inform the Environmental Agency (emergency telephone number 0800-807060).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect and transfer the product into a properly labelled and tightly closed container. Dispose contaminated material as waste according to Section 13. Ensure adequate ventilation. In the event of major spillage: Dike the spill to prevent contamination of local water sources. Use lockable containers for disposal. Dispose of as a hazardous waste, according to local standards. Contact an expert.
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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Additional hazards when processed	: Ensure adequate ventilation.
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- Precautions for safe handling : Smoking, eating and drinking should be prohibited in the application area.
 Do not breathe dust.
- Hygiene measures : Always wash your hands immediately after handling this product, and once again before leaving the workplace.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container in a well-ventilated, locked place.
 Keep in original containers, tightly closed.
 Keep out of reach of children.
 Keep away from food, drink and animal feeding stuffs.
- Suitable materials HDPE (high density polyethylene)
 Aluminium composite film (min. 0.007 mm Aluminium)

7.3. Specific end use(s)

Plant Protection Products

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethoprophos (13194-48-4)		
United Kingdom	WEL TWA (mg/m ³)	0.1 mg/m ³

8.2. Exposure controls

- Personal protective equipment : Protective clothing. Half-mask with particle filter FFP2 (EN149 or EN140P2). Gloves. Protective goggles.



- Materials for protective clothing : Chemical resistant protective clothing. Impervious protective clothing.
- Hand protection : Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0.40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.
- Eye protection : Wear goggles conforming to EN166 (Field of Use 5) and faceshield conforming to EN166 (Field of Use 3).
- Skin and body protection : Wear standard coverall and type 3 suit.
 Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

Respiratory protection	: Wear respirator conforming to EN149FFP2 or EN140P2. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
Hygiene measures	
Protective measures	:Wash hands immediately after work, if necessary take a shower. Remove and wash contaminated clothing before re-use. :Cholinesterase activity of the worker should be supervised.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Pellets.
Colour	: Grey
Odour	: Unpleasant
Odour threshold	: No data available
pH	: 7 (1%) (Based on Mocap 10 G)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point (Ethropophos)	: < -70 °C
Boiling point (Ethropophos)	: 244.3 °C
Flash point	: 141 °C
Self ignition temperature	: 280°C (based on active ingredient) No self heating properties shown. (based on Mocap 10G)
Decomposition temperature	: 244.3 °C
Flammability (solid, gas)	: Not flammable.
Vapour pressure (Ethropophos)	: 7.8×10^{-2} (20°C)
Relative vapour density at 20 °C	: No data available
Relative density (Ethropophos)	: 1.096
Solubility (Ethropophos)	: pH 4: 1.3 g/L at 30 °C pH unadjusted: 1.4 g/L at 30 °C pH 9: 1.3 g/L at 30 °C
Log Pow	: 3.1 - 3.6
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: It has no oxidising properties.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Organothiophosphates, such as ETHOPROPHOS, are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides. Partial oxidation by oxidizing agents may result in the release of toxic phosphorus oxides.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Strong oxidising and reducing agents. Bases.

10.6. Hazardous decomposition products

Not Known

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Fatal in contact with skin. Fatal if inhaled.
 May be lethal if absorbed through eyes: rabbits died via ocular exposure.

Mocap 15G	
LD ₅₀ oral rat	300 mg/kg
LD ₅₀ dermal rat	>2000 mg/kg
LC ₅₀ inhalation rat	0.0051 mg/l (Not relevant because of low dust formation)

Skin corrosion/irritation : No skin irritation (rabbit)
 Serious eye damage/irritation : No eye irritation (rabbit)
 Respiratory or skin sensitisation : Sensitising to mice in local lymph node assay (LLNA)
 Germ cell mutagenicity : The substance is not mutagenic.
 Carcinogenicity : The active substance does not have carcinogenic potential
 Reproductive toxicity : The active substance does not cause reproductive toxicity
 Aspiration hazard : Not known to be an aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

Mocap 15G	
LC ₅₀ Fishes (<i>Oncorhynchus mykiss</i>)	1.71 mg/l (96h)
EC ₅₀ Daphnia (<i>Daphnia magna</i>)	0.2 mg/l (48h)

12.2. Persistence and degradability

Mocap 15G

Persistence and degradability	Not readily biodegradable.
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Moderate to high persistence (DT50_{lab} = 10-113 d, 20-25°C, different soil moisture conditions (based on active ingredient)).

12.3. Bioaccumulative potential

High chronic risk to aquatic invertebrates and risk of bioaccumulation under vulnerable conditions where contamination of surface water potentially occurs (based on active ingredient).

12.4. Mobility in soil

Very high to medium mobility. K_{oc} = 38-186 mL/g (a.i.).

12.5. Results of PBT and vPvB assessment

NA

12.6. Other adverse effects

The acute risk, short-term risk and long term-risk to small granivorous birds from intentional uptake of granules is high.

LD50 = 6.04 mg a.s./kg bw for a bobwhite quail.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: **Product:**

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging:

Not completely emptied packagings should be disposed of as hazardous waste.

Waste key for the unused product:

020108 agrochemical waste containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No. : 2783

14.2. UN proper shipping name

Proper Shipping Name : Pesticide, organic phosphorous compound, solid, toxic (Ethoprophos mixture)

Transport document description : UN 2783 Pesticide, organic phosphorous compound, solid, toxic (Ethoprophos mixture), II

14.3. Transport hazard class(es)

Hazard labels (UN) : 6.1



14.4. Packing group

Packing group (UN) : II

14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 60

Orange plates :



14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Inhalation)	Acute toxicity (inhalation) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Skin Sens. 1	Skin sensitisation Category 1
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H400	Very toxic to aquatic life

H410	Very toxic to aquatic life with long lasting effects
R25	Toxic if swallowed
R26/27	Very toxic by inhalation and in contact with skin.
R43	May cause sensibilisation by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
T	Toxic
T+	Very toxic
Xi	Irritant

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.