

## 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 C1141  
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. Nematicide .

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

#### Supplier:

AMVAC B.V  
p/a Kokermolen 5  
3994 DG Houten - Nederland.

#### Distributor:

CERTIS UK  
Suite 5, 3 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](mailto:certis@certiseurope.co.uk)  
Website: [www.certiseurope.co.uk](http://www.certiseurope.co.uk)

### 1.4. Emergency telephone number

Emergency number : Certis Carechem24 multilingual 24 hours emergency number: +44 (0) 870 190 6777.  
For further advice for medical professionals:  
The National Poisons Information Service: +44 (0) 870 600 6266.  
For further advice for veterinary surgeons: +44 (0) 20 7635 9195  
**Dublin** - National Poisons Information Centre, Beaumont Hospital, Dublin 9:  
Available from 8 am to 10 pm - 7 days: +353 (01) 809 2166  
Available 24hrs: +353 (01) 809 2566

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 3 (Oral) H301

Acute Tox. 1 (Dermal) H310

Skin Sens. 1 H317

Aquatic Chronic 1 H410

Full text of H-phrases: see section 16.

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301 - Toxic if swallowed  
H310 - Fatal in contact with skin  
H317 - May cause an allergic skin reaction  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician  
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water  
P363 - Wash contaminated clothing before reuse  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P501 - Dispose of contents/container by returning container to the supplier.

EUH phrases

: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.  
EUH070 - Toxic by eye contact.

## 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	% (w/w)	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 H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.  
 Keep victim warm. Wash contaminated clothing before reuse. Discard any shoes or clothing items that cannot be decontaminated. This product is a Cholinesterase Inhibitor. A physician should be contacted in all cases of exposure to the technical and its formulations.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance.  
 Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control centre immediately.
- First-aid measures after skin contact : Remove contaminated clothing immediately and wash skin with soap and water. Take off immediately all contaminated clothing. Call a physician or poison control centre immediately.  
 For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse. Wash clothing separately before reuse.
- First-aid measures after eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.
- First-aid measures after ingestion : Call a physician or poison control centre immediately. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

- Symptoms/injuries : May cause an allergic skin reaction. Dermatitis. Rash. This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. these include: (for plasma) chronic alcoholism; malnutrition; dermatomyositis; existing toxicity from exposure to carbon disulfide; benzalkonium salts, organic mercury compounds, ciguatoxins or solanines; and (for RBC) hemolytic anemia.

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

Treat symptomatically. This product is an Organophosphate (OP) Insecticide. Do not handle the patient without the following protective equipment in place: chemical resistant gloves and apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste. Do not wait for laboratory confirmation

to treat patients with strong clinical evidence of poisoning. Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minutes intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 0.25 grams. Avoid morphine, aminophylline, phenothiazine, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may without warning cause prolonged susceptibility very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed indotracheal tube.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray  
Dry chemical powder  
Alcohol resistant foam  
Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Water spray jet.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustion or thermal decomposition will generate toxic vapours.  
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 and full protective clothing must be worn in case of fire.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedure

For non-emergency personnel : Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

For emergency responders : Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS. Use personal protection recommended in Section 8 of the SDS.

### 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.

### 6.3. Methods and material for containment and cleaning up

Methods and material for containment and cleaning up : The product is immiscible with water and will sediment in water systems. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Stop the flow of material, if this is without risk, to prevent entry into waterways, sewer, basements or confined areas. Dike the spilled material, where this is possible to prevent contamination of local water sources. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Clean the area as described for a small spill. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Clean surface thoroughly to remove residual contamination.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Do not get this material on clothing. Wear appropriate personal protective equipment. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

### 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.  
Store in a cool, dry place out of direct sunlight.  
Keep away from incompatible materials (section 10)

### 7.3. Specific end use(s)

Insecticide. Nematicide . For agricultural use. Refer to the label.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

- Occupational exposure limits : No exposure limits noted for ingredient(s).
- Biological limit values : No biological exposure limits noted for the ingredient(s).
- Recommended monitoring procedures : Follow standard monitoring procedures.
- Derived no-effect level (DNEL) : Not available.
- Predicted no effect concentrations (PNECs) : Not available.

### 8.2. Exposure controls

- Appropriate engineering controls : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

#### Individual protection measures, such as personal protective equipment

- General information : Wear chemical protective equipment that is specifically recommended by the manufacturer. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
- Eye/face protection : Face-shield. Wear a full-face respirator, if needed.
- Skin protection
- Hand protection : Wear appropriate chemical resistant gloves. Wear protective gloves. Suitable gloves can be recommended by the glove supplier.
  - Other : Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Respiratory protection : When respiratory protection is required, or concentrations may exceed the PEL, use an approved air-purifying respirator equipped with organic vapor cartridges or canisters. It is recommended that the canisters be changed whenever breakthrough occurs or eight (8) hours of use has occurred, whichever comes first. For emergency and other conditions where the exposure limit may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-airline with auxiliary self-contained air supply.
- Thermal hazards : Wear appropriate thermal protective clothing, when necessary.
- Hygiene measures : When using, do not eat, drink or smoke. Do not get this material on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
- Environmental exposure controls : Contain spills and prevent releases and observe national regulations on emissions. Inform appropriate managerial or supervisory personnel of all environmental releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Granules.
- Colour : Grey
- Odour : Mild chemical odor.
- pH : Not applicable.
- Freezing point : Not applicable

Boiling point (Ethoprophos )	:	86-91 °C at 0.2 mm Hg
Decomposition temperature (Ethoprophos )	:	203 °C
Flammability (solid, gas)	:	Not flammable.
Vapour density	:	Heavier than air
Relative density (Ethoprophos )	:	1.096
Solubility	:	Insoluble in water.
Log Pow	:	3.1 - 3.6
Oxidising properties	:	It has no oxidising properties.

## 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

Contact with incompatible materials. Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Alkali metals. Isocyanates

### 10.6. Hazardous decomposition products

No hazardous decomposition products are known. This product may emit hazardous fumes of hydrogen chloride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. WEAR SELF-CONTAINED BREATHING APPARATUS when these conditions are present.

## SECTION 11: Toxicological information

General information : Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

Inhalation	:	No adverse effects due to inhalation are expected.
Skin contact	:	Toxic in contact with skin.
Eye contact	:	Toxic by eye contact.
Ingestion	:	Toxic if swallowed.

Symptoms : May cause an allergic skin reaction. Dermatitis. Rash.

### 11.1. Information on toxicological effects

Acute toxicitty : Toxic if swalled. May cause an allergic skin reaction. Toxic in contact with skin.

Mocap 15G	
LD <sub>50</sub> dermal rabbit	44,7 mg/kg (male) 41,4 mg/kg (female)
LD <sub>50</sub> dermal rat	>2000 mg/kg

Mocap 15G	
LC <sub>50</sub> rat	Product is a granule, no adverse effects due to inhalation are expected.

Skin corrosion/irritation	: No skin irritation (rabbit)
Serious eye damage/irritation	: Not conducted due to high toxicity. Due to partial or complete lack of data the classification is not possible.
Respiratory or skin sensitisation	: Not conducted due to high toxicity Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	: Product may cause skin sensitization.
Germ cell mutagenicity	: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Available data on the active ingredient indicates the substance is not mutagenic or genotoxic.
Carcinogenicity	: Due to partial or complete lack of data the classification is not possible. This product is classified as a "likely" human carcinogen by EPA due to the occurrence of malignant adrenal pheochromoctomas in male rats.
Reproductive toxicity	: Due to partial or complete lack of data the classification is not possible. This product has not shown any reproductive effects in laboratory animals.
Specific target organ toxicity single exposure	: Due to partial or complete lack of data the classification is not possible. Studies with the active ingredient do not warrant classification.

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxicity	: Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organism is expected. M=10 (Ethoprop chronic effects)
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Ethoprop (13194-48-4)	
EC <sub>50</sub> Algae	2,4 mg/l (5 days)
EC <sub>50</sub> Daphnia ( <i>Daphnia magna</i> )	0,2 mg/l (48h)
LC <sub>50</sub> Fishes ( <i>Lepomis macrochirus</i> )	0,3 mg/l (96h)
LC <sub>50</sub> Daphnia ( <i>Daphnia magna</i> )	0,002 mg/l (21 days)
LC <sub>50</sub> Fishes ( <i>Oncorhynchus mykiss</i> )	0,064 mg/l (21 days)

### 12.2. Persistence and degradability

No data is available.

### 12.3. Bioaccumulative potential

Ethoprop (13194-48-4)	
Log Kow	3,59

### 12.4. Mobility in soil

No data is available.

### 12.5. Results of PBT and vPvB assessment

No data is available.

### 12.6. Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creatpotential, endocrine disruption, global warming potential) are expected from this product.



**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Disposal methods/information : Return to supplier. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

**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**

Source of Information: Safety Data Sheet of AMVAC. MOCAP 15G. March 17<sup>th</sup>, 2015. Version 5.0

Indication of changes:

Change date	Previous Version	Section	Changed Item	Change	Comments
16/04/2015	2.1	2	P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.	modified	RA (ES)
04/09/2015	2.2	2	P284 – Wear respiratory protection	removed	RA (ES)
			EUH070	added	
15/09/2015	2.3		General update according to the AMVAC SDS (Version 5.0)		Amended request in section
24/04/2018	2.6	1.3	Emergency number	updated	

Full text of H- and EUH-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
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	Sensitisation — Skin, category 1
H301	Toxic 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

*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.*