

1. Identification

Product identifier	MOCAP 15G
Other means of identification	
SDS number	462
Product registration number	5481-9040
Synonyms	Mocap Nemacide-Insecticide Mocap 15% Granular Lock 'n Load Closed Loading System * Ethoprop (a.i.) * Ethoprophos (a.i.)
Recommended use	Organophosphate insecticide.
Recommended restrictions	This is a Restricted Use Pesticide and is for use by licensed applicators only. Keep out of the Reach of Children!
EPA Registration number	EPA: 5481-9040
Manufacturer/Importer/Supplier/Distributor information	
Company Name	AMVAC Chemical Corporation
Address	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660 United States
Telephone	
AMVAC Chemical Corp	949-260-1200
AMVAC Chemical Corp	949-260-6270(FAX)
Product Use	888-462-6822
Website	www.amvac.com
E-mail	CustServ@amvac.com
Emergency phone number	
Medical	888-681-4261
CHEMTREC® (USA+Canada)	800-424-9300
CHEMTREC® (Outside USA)	+1-703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 3
	Sensitization, skin	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Toxic if swallowed. Toxic in contact with skin. May cause an allergic skin reaction. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement	
Prevention	Wear protective gloves/protective clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
Response	If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. Call a poison center/doctor if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethoprophos	Ethoprophos; Ethoprofos O-Ethyl-S,S-dipropyl phosphorodithionate	13194-48-4	15

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison center or doctor/physician for further treatment advice.
Skin contact	Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center for treatment advice. For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a physician or poison control center for treatment advice.
Ingestion	Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. 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.
Most important symptoms/effects, acute and delayed	May cause allergic skin reaction. Irritation of eyes and mucous membranes. Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, 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.

Indication of immediate medical attention and special treatment needed

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. Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning. In the USA and other countries, contact your local or national poison control center for more information.

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 minute 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 20 minute 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 1 gram 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 to 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 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 endotracheal tube.

General information

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.

5. Fire-fighting measures

Suitable extinguishing media

Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Use water spray to cool unopened containers. Water runoff can cause environmental damage.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. 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.

Methods and materials 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. Shovel up and place in a container for salvage or disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for reuse.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment recommended in section 8. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid release to the environment. Do not empty into drains. Wash thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities	Store locked up. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
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8. Exposure controls/personal protection

Occupational exposure limits	This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Ensure adequate ventilation, especially in confined areas.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear chemical resistant gloves (preferably nitrile).
Other	Wear appropriate chemical resistant clothing (see label).
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. 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	Not applicable.
General hygiene considerations	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.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Coated granules
Color	Gray
Odor	Mild chemical odor.
Odor threshold	Not established
pH	Not applicable
Melting point/freezing point	Not applicable (coated granule)
Initial boiling point and boiling range	186.8 - 195.8 °F (86 - 91 °C) @ 0.2 mm Hg (a.i.)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.094 estimated
Solubility(ies)	
Solubility (water)	Insoluble in water
Solubility (other)	Miscible in aromatic and aliphatic hydrocarbons, alcohols, ketones, ethers, esters, chlorinated solvents and vegetables oils (a.i.)
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	397.4 °F (203 °C) (a.i.)
Viscosity	Not available.
Other information	The data presented in this section are typical values and should not be construed as a specification.

Density	45.00 lb/ft ³
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Alkaline metals. Isocyanates.
Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Toxic in contact with skin. May cause an allergic skin reaction.
Eye contact	No data available due to high toxicity. May be toxic by eye contact.
Ingestion	Toxic if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	May cause an allergic skin reaction. Dermatitis. Rash. Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, 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.

Information on toxicological effects

Acute toxicity	Toxic if swallowed. Toxic in contact with skin.
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Product	Species	Test Results
MOCAP 15G		
<u>Acute</u>		
Dermal		
LD50	female rat	424 mg/kg
	male rat	1280 mg/kg
Inhalation		
LC50	Rat	> 0.0051 mg/l Determined in the form of a respirable fine dust. Not relevant because of low dust formation.
Oral		
LD50	Rat	300 mg/kg

Skin corrosion/irritation	Product is not irritating to the skin.
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Serious eye damage/eye irritation	Not conducted due to high toxicity. May be toxic by eye contact.
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Respiratory or skin sensitization

Respiratory sensitization	Not conducted due to high toxicity.
Skin sensitization	May cause sensitization by skin contact.

Germ cell mutagenicity	Based on available data, the classification criteria are not met.
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Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. This product is classified as a "likely" human carcinogen by EPA due to the occurrence of malignant adrenal pheochromoctomas in male rats upon testing with the active ingredient.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product has not shown any reproductive effects in laboratory animals.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not applicable.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Ethoprophos (CAS 13194-48-4)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Scenedesmus subspicatus	> 3 mg/l, 72 hours
Crustacea	EC50	Daphnia	0.2 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.32 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	LC50	Daphnia	0.002 mg/l, 21 days
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.064 mg/l, 21 days

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethoprophos 2.99

Mobility in soil No data available.

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

13. Disposal considerations

Disposal instructions Dispose of spilled contents in accordance with all applicable local/regional/national/international regulations.
Collect and reclaim or dispose in sealed containers at licensed waste disposal site according to all applicable regulations. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.
Empty returnable containers should be returned to AMVAC Chemical Corporation per instructions provided. See the label on the container for more complete information.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code None known. The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Return unused product and empty returnable containers containing residues to AMVAC Chemical Corporation. See the label on the box for more complete instructions.
Dispose of in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Empty returnable containers should be returned to AMVAC Chemical Corporation per instructions provided, according to all applicable local, regional, national, and international regulations. See the container label for more detailed instructions.

14. Transport information

DOT

UN number	UN2783
UN proper shipping name	Organophosphorus pesticides, solid, toxic (Ethoprophos), MARINE POLLUTANT
Transport hazard class(es)	
Class	6.1
Subsidiary hazard	-
Label(s)	6.1
Packing group	III

Environmental hazards

Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB8, IP3, N77, T1, TP33
Packaging exceptions	153
Packaging non bulk	213
Packaging bulk	240

IATA

UN number	UN2783
UN proper shipping name	Organophosphorus pesticide, solid, toxic (Ethoprophos)
Transport hazard class(es)	
Class	6.1
Subsidiary hazard	-
Packing group	III
Environmental hazards	No
ERG Code	6L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

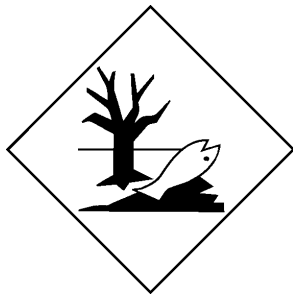
Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2783
UN proper shipping name	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Ethoprophos), MARINE POLLUTANT
Transport hazard class(es)	
Class	6.1
Subsidiary hazard	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-A
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

DOT**IATA; IMDG**

**General information**

DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations as a RESTRICTED USE PESTICIDE. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.**DANGER**

Fatal if absorbed through skin. Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled. Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms (fish and invertebrates) and wildlife and extremely toxic to birds. Birds feeding in treated areas may be killed. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Cover, incorporate or clean up granules that are spilled during loading or are visible on the soil surface in turn areas. Do not contaminate water when disposing of equipment washwaters. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.

Toxic Substances Control Act (TSCA)**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Phosphorodithioic acid O-ethyl S,S- dipropyl ester; 1000 LBS
Ethoprop; Ethoprophos (CAS 13194-48-4)

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Ethoprophos	13194-48-4	1000	1000		

SARA 311/312 Hazardous chemical

Classified hazard categories Acute toxicity (any route of exposure)
Respiratory or skin sensitization

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethoprophos	13194-48-4	15

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations**California Proposition 65**

WARNING: This product can expose you to Ethoprophos, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Ethoprophos (CAS 13194-48-4)

Listed: February 27, 2001

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date Oct-14-2021

Revision date Nov-09-2023

Version # 1.2

HMIS® ratings Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 1
Instability: 0

Disclaimer

This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

Hazard(s) identification: Hazard statement
Hazard(s) identification: Prevention
Hazard(s) identification: Response
First-aid measures: Eye contact
First-aid measures: Ingestion
First-aid measures: Inhalation
First-aid measures: Indication of immediate medical attention and special treatment needed
First-aid measures: Skin contact
Fire-fighting measures: Suitable extinguishing media
Handling and storage: Conditions for safe storage, including any incompatibilities
Regulatory information: US federal regulations
Other information, including date of preparation or last revision: Disclaimer