

1. Identification

Product identifier	MOCAP® 15G™ (BIODAC)
Other means of identification	
SDS number	462
Synonym(s)	Ethoprop (a.i.), Ethoprophos (a.i.)
Recommended use	Not available.
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

Manufacturer

Company name	AMVAC Chemical Corporation	
Address	4100 E Washington Blvd Los Angeles, CA 90023 USA	
Telephone	AMVAC Chemical Corp	323-264-3910
	AMVAC Chemical Corp	323-268-1028 (FAX)
Website	www.Amvac-Chemical.com	
E-mail	CustServ@Amvac-Chemical.com	
Emergency phone number	Medical	888-681-4261
	CHEMTREC® (USA+Canada)	800-424-9300
	Product Use	888-462-6822
	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 5
	Sensitization, skin	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Toxic if swallowed. May be harmful in contact with skin. May cause an allergic skin reaction.
Precautionary statement	
Prevention	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing.
Response	If swallowed: Immediately call a poison center/doctor. IF ON SKIN: Gently wash with plenty of soap and 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)	Very toxic to aquatic life with long lasting effects.
Supplemental information	May be harmful in contact with the skin.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ETHOPROP		13194-48-4	15
Undisclosed Ingredients		N/A	85

4. First-aid measures

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 center immediately.

Skin contact

Take off contaminated clothing and wash before reuse. Wash off with soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. For minor skin contact, avoid spreading material on unaffected skin.

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 center immediately.

Ingestion

Call a physician or poison control center 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.

Most important symptoms/effects, acute and delayed

May cause allergic skin reaction. Irritation of eyes and mucous membranes. 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.

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. 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. 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 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 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 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. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	The product is immiscible with water and will sediment in water systems. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. 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.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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	Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment recommended in section 8. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains. 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. Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
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	Avoid contact with eyes.
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	187 - 196 °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	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Heavier than air
Relative density	1.094 g/cm ³ 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.)
Auto-ignition temperature	Not available.
Decomposition temperature	397.4 °F (203 °C) (a.i.)
Viscosity	Not available.
Other information	
Density	45.00 lb/ft ³

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	No adverse effects due to inhalation are expected.
Skin contact	May be harmful in contact with skin.
Eye contact	Direct contact with eyes may cause temporary irritation. May be harmful by eye contact.
Ingestion	Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Toxic if swallowed. May be harmful in contact with skin. May cause an allergic skin reaction.

Product	Species	Test Results
MOCAP® 15G™ (BIODAC)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	> 0.0051 mg/kg Determined in the form of a respirable fine dust. Not relevant because of low dust formation.
Oral		
LD50	Rat	300 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Product is not irritating to the skin.
Serious eye damage/eye irritation	Not conducted due to high toxicity. Toxic by eye contact.
Respiratory or skin sensitization	
Respiratory sensitization	Not conducted due to high toxicity
Skin sensitization	Product may cause skin sensitization.
Germ cell mutagenicity	Available data on the active ingredient indicates the substance is not mutagenic or genotoxic.
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.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not available.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not available.	
Reproductive toxicity	This product has not shown any reproductive effects in laboratory animals.
Specific target organ toxicity - single exposure	Studies with the active ingredient do not warrant classification.
Specific target organ toxicity - repeated exposure	Studies with the active ingredient do not warrant classification.
Aspiration hazard	Not applicable.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components	Species	Test Results	
ETHOPROP (CAS 13194-48-4)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Algae	2.4 mg/l, 5 days
Crustacea	EC50	Daphnia magna	0.2 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.3 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 this product.

Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol / water (log Kow)

ETHOPROP 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 product.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with all applicable local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN2783
UN proper shipping name Organophosphorus pesticides, solid, toxic (Ethoprop Mixture), MARINE POLLUTANT
Transport hazard class(es)
Class 6.1(PGI, II)
Subsidiary risk -
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, IP2, IP4, N77, T3, TP33
Packaging exceptions 153
Packaging non bulk 212
Packaging bulk 242

IATA

UN number UN2783
UN proper shipping name Organophosphorus pesticide, solid, toxic (Ethoprop Mixture)
Transport hazard class(es)
Class 6.1(PGI, II)
Subsidiary risk -
Packing group III
Environmental hazards Yes
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.

IMDG

UN number UN2783
UN proper shipping name ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (Ethoprop Mixture), MARINE POLLUTANT
Transport hazard class(es)
Class 6.1(PGI, II)
Subsidiary risk -
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.

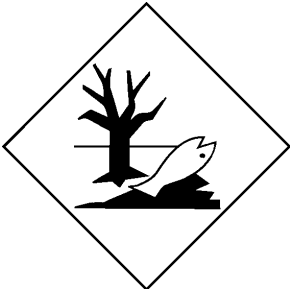
DOT



IATA; IMDG



Marine pollutant



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 inhaled or swallowed. 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 chemical is highly 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. Do not contaminate water when disposing of equipment washwater or rinsate. Runoff may be hazardous to aquatic organisms in neighboring areas. Cover, collect, or incorporate spilled granules.

This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.

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

ETHOPROP (CAS 13194-48-4) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
ETHOPROP	13194-48-4	1000	1000 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
ETHOPROP	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

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

ETHOPROP (CAS 13194-48-4)

US. New Jersey Worker and Community Right-to-Know Act

ETHOPROP (CAS 13194-48-4)

US. Pennsylvania Worker and Community Right-to-Know Law

ETHOPROP (CAS 13194-48-4)

US. Rhode Island RTK

ETHOPROP (CAS 13194-48-4)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

ETHOPROP (CAS 13194-48-4)

Listed: February 27, 2001

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	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 05-14-2015

Revision date 02-18-2016

References

ACGIH
EPA: ACQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
ACGIH®: American Conference of Governmental Industrial Hygienists
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
EPA: Environmental Protection Agency
FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Agency
SARA: Superfund Amendments and Reauthorization Act
TSCA: Toxic Substances Control Act
DOT: Department of Transportation
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association

Version # 04

Further information Not available.

HMIS® ratings

Health: 2
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 0
Instability: 0

Disclaimer

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. 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.

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.