

1. Identification

Product identifier	AZTEC® SmartBox® 4.67 G	
Other means of identification		
SDS number	292	
Recommended use	Organophosphate insecticide. For control of corn rootworms, cutworms and other listed soil insect pests in corn.	
Recommended restrictions	This is a Restricted Use Pesticide and is for use in the SmartBox® enclosed system.	
EPA Registration number	EPA: 5481-9028	
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, inhalation	Category 3
	Reproductive toxicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Toxic if swallowed. Fatal if inhaled. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.
Response	If swallowed: Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment is urgent (see this label). Rinse mouth. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	SmartBox® containers should be returned to the manufacturer. Dispose of waste and residues in accordance with all applicable regulatory requirements.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

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.

WARNING

May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapor or dust. Avoid contact with eyes, skin, and clothing. This product is toxic to fish and wildlife. Do not apply directly to water, or to areas where surface water is present (except for application to cranberry bogs) or to intertidal areas below the mean high water mark. Do not allow this material to drift onto neighboring crops or noncrop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues, or other undesirable results may occur.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Tebupirimphos	O-(2-tert-butylpyrimidin-5-yl) O-ethyl O-isopropyl phosphorothioate phostebupirim	96182-53-5	4.45
Cyfluthrin		68359-37-5	0.22

Additional components

Chemical name	CAS number	%
Other compounds		95.33

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

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Do not rub eyes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. If there will be a delay in getting medical attention, rinse the eyes an additional 15 minutes.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Have person sip a glass of water if able to swallow. 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. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Most important symptoms/effects, acute and delayed

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. Dusts may irritate the respiratory tract, skin and eyes.

Indication of immediate medical attention and special treatment needed

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. 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. Keep victim under observation. Keep victim warm. Symptoms may be delayed.

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (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. 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

None known.

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. Dike and collect extinguishing water.

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 people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. 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

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Shovel the material into waste container. Prevent product from entering drains. Clean surface thoroughly to remove residual contamination. Scrub contaminated area with detergent and bleach solution.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. 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

Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Keep product away from food, drink, cosmetics, and tobacco products. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. 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

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Additional components	Type	Value	Form
Nuisance Dust	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Additional components	Type	Value	Form
Nuisance Dust	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		0.3 mg/m ³	Total dust.
free respirable Crystalline (quartz) Silica (CAS 14808-60-7)	TWA	0.1 mg/m ³	Respirable.

US. ACGIH Threshold Limit Values

Additional components	Type	Value	Form
free respirable Crystalline (quartz) Silica (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Additional components	Type	Value	Form
free respirable Crystalline (quartz) Silica (CAS 14808-60-7)	TWA	0.05 mg/m ³	Respirable dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

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.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

Other

Wear appropriate chemical resistant clothing (see label). The following clothing is required: overalls or pants and long-sleeved shirt, chemical resistant gloves (preferably nitrile), chemical resistant boots. For added protection a chemical resistant apron and a full face shield are recommended. If there is a risk of splashing, misting or release the following additional PPE is required: two piece hooded chemical resistant suit with either a full face respirator or a SCBA. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are available, use detergent and hot water. Keep and wash PPE separately. The label should be consulted for more detailed instructions on appropriate PPE.

Respiratory protection

Use a NIOSH/MSHA approved dust/mist filtering respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. The label should be consulted for more specific information with regards to respiratory protection.

Thermal hazards

Not available.

General hygiene considerations

Keep away from food and drink. 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	Dry flowable granules.
Color	Gray, tan, or reddish
Odor	Slight onion-like odor
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
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	Not available.
Solubility(ies)	
Solubility (water)	negligible solubility
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available.
Viscosity	Not applicable
Other information	
Bulk density	38 - 43 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	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong bases.
Hazardous decomposition products	Not established.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Fatal if inhaled.
Skin contact	Not irritating.
Eye contact	May be irritating to eyes.
Ingestion	Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity Fatal if inhaled. Toxic if swallowed.

Product	Species	Test Results
AZTEC® SmartBox® 4.67 G		
Acute		
Dermal		
<i>Dust</i>		
LD50	Rat	> 5040 mg/kg (Toxicity Category IV)
Inhalation		
<i>Dust</i>		
LC50	Rat	> 0.87 mg/l/4h female (Toxicity Category II)
Oral		
<i>Dust</i>		
LD50	Rat	52.8 mg/kg female (Toxicity Category III)
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Irritation Corrosion - Skin		
AZTEC® SmartBox® 4.67 G		, (Toxicity Category IV) Result: non-irritating Species: Rabbit Organ: Skin
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Eye		
AZTEC® SmartBox® 4.67 G		, (Toxicity Category III) Result: Moderately irritating Species: Rabbit Organ: eye
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	Not sensitizing.	
Sensitization		
AZTEC® SmartBox® 4.67 G		Result: not a dermal sensitizer Species: Guinea pig Organ: skin
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity		
IARC Monographs. Overall Evaluation of Carcinogenicity		
free respirable Crystalline (quartz) Silica (CAS 14808-60-7)		1 Carcinogenic to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
free respirable Crystalline (quartz) Silica (CAS 14808-60-7)		Known To Be Human Carcinogen.
Reproductive toxicity	Suspected of damaging fertility or the unborn child.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Cyfluthrin (CAS 68359-37-5)		
Aquatic		
Crustacea	LC50	Water flea (Daphnia magna)
		0 - 0.0005 mg/l, 48 hours

Components	Species	Test Results
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.0005 - 0.0007 mg/l, 48 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Cyfluthrin 5.94

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 Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Return the damaged SmartBox® container to AMVAC Chemical Corporation. See box label for more complete instructions.

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 Return unused product and empty SmartBox(R) containers containing residues to AMVAC Chemical Corporation. See the label on the box for more complete instructions. 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). Dispose of container and residues in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty SmartBox® containers should be returned to AMVAC Chemical Corporation per instructions provided. See the label on the container for more complete information.

14. Transport information

DOT

UN number UN2783
UN proper shipping name Organophosphorus pesticides, solid, toxic (Tebupirimphos,Cyfluthrin) MARINE POLLUTANT
Transport hazard class(es)
Class 6.1(PGIII)
Subsidiary risk -
Label(s) 6.1
Packing group III
Environmental hazards
Marine pollutant Yes (IMDG 2.9.3.3)
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 pesticides, solid, toxic (Tebupirimphos, Cyfluthrin) MARINE POLLUTANT
(over bodies of water)
Transport hazard class(es) 6.1(PGIII)
Subsidiary risk -
Label(s) 6.1
Packing group III
Environmental hazards Yes (when shipped over bodies of water)
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

IMDG

UN number UN2783
UN proper shipping name Organophosphorus pesticides, solid, toxic (Tebupirimphos, Cyfluthrin) MARINE POLLUTANT

Transport hazard class(es)

Class 6.1(PGIII)

Subsidiary risk -

Label(s) 6.1

Packing group III

Environmental hazards

Marine pollutant Yes

EmS Not available.

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.

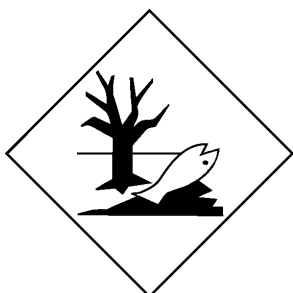
DOT



IATA; IMDG



Marine pollutant



General information

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.

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

Not regulated.

References

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 #

01

Further information

Not available.

HMIS® ratings

Health: 3*
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 3
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

Product and Company Identification: Product Registration Numbers
Hazards Identification: US Hazard Categories
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Property Data
Transport Information: Physical States
Regulatory Information: United States
HazReg Data: International Inventories