

**[1. Identification]**

Product name: Tide Acephate 97SG
Chemical name: O,S-dimethyl acetylphosphoramidothioate
Chemical family: Organophosphate
EPA Reg. No.: 80697-13
Recommended Use: Insecticide
Importer/Supplier: Zhejiang Tide CropScience Co., Ltd.
21 Hubble, Irvine, CA 92618
(949) 679-3535

For medical or chemical* emergencies:
*Spill, leak, fire, exposure or accident Call CHEMTREC®: 1-800-424-9300 (24 hours/day)

For non-emergency product information: Call the NATIONAL PESTICIDE INFORMATION CENTER
1-800-858-7378 (Monday - Friday, 8-12 PM Pacific time)

[2. Hazard(s) Identification]

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR §1910.1200

Classification of the substance or mixture: Mixture

Acute oral (Category 4)

Acute dermal toxicity (Category 5)

Skin sensitization (Category 1B)

GHS label elements:

GHS pictograms



Signal Word: **WARNING**

GHS Hazard statements

H302 Harmful if swallowed
H313 May be harmful in contact with skin
H317 May cause an allergic skin reaction

Precautionary statements:

Prevention:

P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P261 Avoid breathing dust/fumes/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.
P330 Rinse mouth.
P312 Call a POISON CENTER/doctor/if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see ... on this label).
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

Routes of exposure: Eyes, skin, ingestion & inhalation.

Carcinogenicity: High doses of Acephate Technical have produced cancer in mice but there is no evidence that Acephate Technical causes cancer in humans. EPA has classified Acephate as a Group C (possible) human carcinogen based on the cancer produced in female mice. This product is not listed as a carcinogen by the national toxicology program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

Other health concerns

NFPA Ratings: Health-2 Flammability-1 Reactivity-0

[3. Composition / Information on Ingredients]

According to Hazard Communication Standard (HCS) or 29 CFR §1910.1200 (2012).

Common name	CAS No.	Content (w/w,%)	ACGIH TWA
Acephate	30560-19-1	97.0 min.	NA

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

[4. First aid measures]

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

If swallowed: Call a POISON CENTER or doctor/physician if you feel unwell. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If inhaled: Remove person to fresh air and keep comfortable for breathing. If person is not breathing, call 911 for an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor/physician if you feel unwell.

Most important symptoms/effects, acute and delayed:

This product contains Acephate, a cholinesterase inhibitor. Acute overexposures by oral, dermal or inhalation routes may produce signs and symptoms of toxicity, usually within several hours of exposure, including but not limited to headaches, dizziness, weakness, constriction of the pupil, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating, abdominal cramps, nausea, diarrhea and vomiting. Severe poisonings may result in incontinence, unconsciousness, convulsions and death.

Note to physician: Acephate is a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure but decisions regarding treatment will usually need to be made before test results are available. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.

[5. Fire-Fighting measures]

Suitable extinguishing media: Carbon dioxide, dry chemical, foam, water fog.

Unsuitable extinguishing media: High volume water jet.

Special hazards arising from the chemical (hazardous combustion products): Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur, nitrogen and phosphorous. Incomplete combustion can produce carbon monoxide.

Special protective equipment and precautions for fire-fighters: Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Products of combustion from fires involving this product may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for firefighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and firefighting equipment before reuse.

[6. Accidental release measures]

Personal precautions, protective equipment and emergency procedures:

Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

For personal protective equipment see section 8.

Environmental precautions:

Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Eliminations System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations. Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact nontarget plants.

[7. Handling and Storage]

Precautions for safe handling:

Use only outdoors or in a well-ventilated area.

Keep exposure to this product to a minimum, and minimize the quantities kept in work areas.

Avoid breathing dust/fume/gas/mist/ vapors/spray.

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed.

The measures detailed below under "Storage" should be followed during handling in order to minimize risks to persons using the product in the workplace.

Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Conditions for safe storage:

Keep pesticide in original container.

Store in a cool, dry place away from excessive heat.

Do not put concentrate or dilute into food or drink containers.

[8. Exposure controls / Personal protection]

Control parameters:

Components.	CAS-No	Control parameters	Basis
Acephate	30560-19-1	NA	NA

Appropriate engineering controls:

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

The use of human flaggers is prohibited.

Individual protection measures, such as personal protective equipment (PPE)

Always follow the label instructions when handling this product. In all other cases the following recommendations would apply.

Some materials that are chemical-resistant to this product include butyl rubber, nitrile rubber, or neoprene. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

Applicators, mixers, loaders and other handlers must wear:

Long-sleeved shirt and long pants;

Chemical-resistant gloves for all mixers and loader and for applicators using hand-held application equipment;
Shoes and socks.

In addition, all mixers and loaders and all applicators using low pressure hand wand application equipment must wear:
A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC21C or a NIOSH-approved respirator with any N, R P, or HE filter.

Respiratory protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC) or Viton)

Eye protection Protective eyewear (goggles, face shield or safety glasses)

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks. Wear a chemical resistant apron when mixing/loading and cleaning equipment.

[9. Physical and chemical properties]

Appearance (physical state, color etc.): White granular

Odor: A characteristic odor (rotten cabbage like)

Odor threshold: No data available

pH value: 3.0-5.0

Melting point/freezing point: 85-88°C

Initial boiling point and boiling range: No Data Available

Flash point: No data applicable

Evaporation rate: No data available

Flammability (solid, gas): No flammable

Upper/lower flammability or explosive limits: Not applicable

Vapor pressure: 1.7×10^{-6} mmHg at 23 - 25°C (Acephate)

Vapor density: No Data Available

Density: .0.57±0.05g/mL (Tap bulk density)

Solubility(ies): Soluble in water

Partition coefficient: n-octanol/water: Kow: 0.13 at 25°C

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data Available

Note Physical data are typical values based on material test but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis or as a specification.

[10. Stability and reactivity]

Reactivity: Product will not undergo polymerization

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Will not occur hazardous polymerization.

Conditions to avoid (e.g. static discharge, shock or vibration): High temperatures and excess moisture.

Incompatible materials: Avoid contact with alkaline materials.

Hazardous decomposition products: Contact with alkaline materials including hypochlorite oxidants may produce noxious gases.

[11. Toxicological information]

Exposure routes: Eyes, skin, ingestion & inhalation.

Acute toxicity (Based on Acephate technical):

Acute oral (rats): LD₅₀ for female rat 1127 mg/kg b.w., male rat 688 mg/kg b.w. LD₅₀ for the combined sexes is 846 mg/kg b.w.

Acute dermal (rabbits): LD₅₀ for rabbits >2000mg/kg b.w.

Acute inhalation (Rats): LC₅₀ (4h) >15mg/L air

Acute eye irritation (rabbits): Not a skin sensitizer in guinea pig.

Acute dermal irritation (rabbits): No skin irritating.

Skin sensitization (mice): Minimally skin sensitizing reaction in guinea pig.

Chronic Toxicity: In 2-year feeding trials, dogs exhibited depression of cholinesterase at 100 mg/kg diet (maximum dose level) of acephate but no other significant effects; rats showed depression of cholinesterase but no effect on weight gain or pathological effect at 30 mg/kg diet. Another feeding study noted that rats did not produce pathological changes over a 90-day period when fed up to 300 mg/kg body weight of acephate.

Carcinogenicity: High doses of Acephate Technical have produced cancer in mice but there is no evidence that Acephate Technical causes cancer in humans. EPA has classified Acephate as a Group C (possible) human carcinogen based on the cancer produced in female mice. This product is not listed as a carcinogen by the national toxicology program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

Reproduction: There is no evidence that Acephate Technical causes reproductive effects in humans.

Developmental Toxicity: There is no evidence that Acephate Technical causes birth defects.

Neurotoxicity: No delayed neurotoxicity.

Mutagenicity: Acephate is not considered to be a mutagenic hazard.

[12. Ecological information]

Ecotoxicity (Based on Acephate Technical):

Avian toxicity:

Japanese quail (*C. coturnix japonica*) Diet LC50 = 3275mg a.i./kg diet

Northern bobwhite (*C. virginianus*) Diet LC50 = 1280mg a.i./kg diet

Mallard duck (*A. platyrhinchus*) Oral LD50=350mg a.i./kg b.w.

Northern bobwhite (*C. virginianus*) Reproductive NOEL =20ppm

Mallard duck (*A. platyrhinchus*) Reproductive NOEL =5ppm

Aquatic organism toxicity:

Bluegill (*L. macrochirus*) LC50=2050mg a.i./L

Mosquitofish (*G. affinis*) LC50=6650 mg a.i./L

Goldfish (*C. auratus*) LC50 \geq 9550mg a.i./L

Crayfish (*P. clarki*) LC50 $>$ 750mg a.i./L

Other non-target organism toxicity:

Honeybee (*A. mellifera* L.) 48hr contact LD50=0.357 μ g a.i./bee

96hr oral LD50=0.271 μ g a.i./bee

Persistence and degradability: Acephate is rapidly degraded in soil by microorganisms under both aerobic and anaerobic conditions. The half-life of acephate ranged from 0.5 to 3 days.

Bioaccumulative potential: Low bioaccumulation potential.

Mobility in the soil: Acephate is highly soluble in water and adheres very poorly to all soil types. The potential for acephate to move off the site of application with rain or irrigation water is rated high. There was no bound acephate or methamidophos present in the soil

Other adverse effects:

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds.

Environmental Precautions: Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Eliminations System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

[13. Disposal considerations]

Dispose of contents and container in accordance with local regulations. End users must dispose of any unused product as per the label recommendations.

Pesticide disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[14. Transport information]

49CFR

According to national and international transport regulations this material is not classified as dangerous goods/hazardous material.

D.O.T.

UN number: N/A
Shipping Description: Not Regulated by DOT
D.O.T. Hazard Class: N/A
Packing group: III
Marine pollutant (Yes/No): No

IMDG/IMO

UN number: N/A
UN proper shipping Name: Not Regulated
Hazard Class: N/A
Packing group: III
Marine pollutant (Yes/No): No

ICAO/IATA

UN number: N/A
UN proper shipping Name: Not Regulated
Hazard Class: N/A
Packing group: III
Environm. Hazardous Mark: No

[15. Regulatory information]

FIFRA

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

EPA Reg. No.: 80697-13

EPA Signal word: Warning

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds.

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 cleaning equipment or disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Eliminations System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

US Federal Regulations

Regulations under FIFRA: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

EPCRA SARA Title III Classification

Section 302 (EHS) TPQ: None

Section 304 (EHS) RQ: None

Section 311/312 Hazard Classes:

Acute (immediate) Health Hazard

Chronic (delayed) Health Hazard

California Proposition 65

This product does not contain any substances known to the State of California to cause cancer or reproductive toxicity.

CERCLA (Comprehensive Response Compensation, and Liability Act) : NA

EPCRA (Emergency Planning and Community Right-to-know Act) Section 313 : Yes

OSHA (Occupational Safety and Health Administration): This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard (29 CFR 1910, 1200.)

RCRA (Resource Conservation and Recovery Act) : NA

TSCA Status

Acephate is exempt from TSCA, subject to FIFRA

State Regulations

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

[16. Other information]

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Zhejiang Tide CropScience Co., Ltd. assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.