SAFETY DATA SHEET

1. Identification

Product identifier ORTHENE® Turf, Tree & Ornamental WSP

Other means of identification

SDS number 373

Product registration

number

5481-8971

Orthene® 75 S Soluble Powder (Insecticide) **Synonyms**

Recommended use Organophosphate insecticide. **Recommended restrictions** See product label for restrictions.

No other uses are advised.

Keep out of the Reach of Children!

EPA: 5481-8971 **EPA Registration number**

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name **AMVAC Chemical Corporation**

Address 4695 MacArthur Court

Suite 1200

Newport Beach, CA 92660

United States

AMVAC Chemical Corp Telephone 949-260-1200

AMVAC Chemical Corp 949-260-6270(FAX)

CustServ@Amvac-Chemical.com E-mail

Emergency phone number Medical 888-681-4261

CHEMTREC® 800-424-9300

(USA+Canada)

888-462-6822 Product Use CHEMTREC® (Outside 1+703-527-3887

USA)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Acute toxicity, oral Category 4 **Environmental hazards** Hazardous to the aquatic environment, Category 2

long-term hazard

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Harmful if swallowed.

Toxic to aquatic life with long lasting effects.

Precautionary statement

Wash thoroughly after handling. Prevention

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

Avoid release to the environment.

If swallowed: Call a poison center/doctor if you feel unwell. Response

> Rinse mouth. Collect spillage.

Store away from incompatible materials. Storage

Disposal

Hazard(s) not otherwise classified (HNOC)

Supplemental information

Dispose of contents/container in accordance with local/regional/national/international regulations.

None known.

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	%
Acephate		30560-19-1	75
(O,S-Dimethylacetylphosphora	mido		
thioate)			

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

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contactWash off with soap and water. Get medical attention if irritation develops and persists. **Eye contact**Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Dusts may irritate the respiratory tract, skin and eyes.

Ingestion Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Get medical advice/attention if you feel unwell.

Most important

symptoms/effects, acute and

delayed

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. The following antidotes are generally accepted: atropine and oximes. Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

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. 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.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing

media

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

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

Move containers from fire area if you can do so without risk.

Specific methods

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

General fire hazards No unusual fire or explosion hazards noted.

SDS US

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. 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.

Methods and materials for containment and cleaning up

This product is miscible in water. Stop the flow of material, if this is without risk. Cover with plastic sheet to prevent spreading. If bags are unbroken, pick them up and place them into a storage container for use according to the label or for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid the generation of dusts during clean-up. Prevent entry into waterways, sewer, basements or confined areas. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

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

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

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-3 (29 CFR 1910.1000)

Components	Туре	Value	
Hydrated amorphous silica (CAS 112926-00-8)	TWA	0.8 mg/m3	
		20 mppcf	
US. NIOSH: Pocket Guide to Chen	nical Hazards		
Components	Туре	Value	
Hydrated amorphous silica (CAS 112926-00-8)	TWA	6 mg/m3	

Biological limit values

Appropriate engineering

controls

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

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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

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 suitable protective clothing.

exceeding the exposure limits.

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

White powder in a water-soluble pouch **Appearance**

Not available. Physical state Liquid. Powder. **Form**

Color White

Strong cabbage-like odor Odor

Odor threshold Not established 4.7 5% in water pН Melting point/freezing point Not available Initial boiling point and boiling Not applicable

range

Flash point Not available. **Evaporation rate** Not applicable Flammability (solid, gas) Not available. Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

(%)

Flammability limit - upper

Not available.

(%)

Not available. Explosive limit - lower (%) Explosive limit - upper (%) Not available.

1.70E-06 mm Hg @ 24°C (acephate) Vapor pressure

Not available. Vapor density Not available. Relative density

Solubility(ies)

Soluble Solubility (water) Not available. **Auto-ignition temperature** Not available. **Decomposition temperature Viscosity** Not available.

Other information

28 - 32 lbs/ft3 **Bulk density** Percent volatile Not applicable

10. Stability and reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport. Reactivity

Chemical stability Material is stable under normal conditions. Possibility of hazardous Hazardous polymerization does not occur.

reactions

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents. Alkaline compounds.

Hazardous decomposition

products

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

conditions are present.

11. Toxicological information

Information on likely routes of exposure

Dust may irritate respiratory system. Prolonged inhalation may be harmful. Inhalation

Skin contact Dust or powder may irritate the skin.

Eve contact Dust may irritate the eyes. Harmful if swallowed. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics

Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Product Species Test Results

ORTHENE® Turf, Tree & Ornamental WSP

<u>acute</u> dermal

LD50 rabbit > 10 g/kg Tox Cat IV

oral

LD50 rat 1447 mg/kg male; Tox Cat III

1030 mg/kg female; Tox Cat III

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Irritation Corrosion - Skin

, Tox Cat IV Result: irritant Species: rabbit Organ: skin Severity: Slight

Serious eye damage/eye

Direct contact with eyes may cause temporary irritation.

irritation

Irritation Corrosion - Eye

, Tox Cat III Result: irritant Species: rabbit Organ: eye Severity: Minimal

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Skin sensitization , Not a sensitizer Species: guinea pig Organ: skin

Germ cell mutagenicity

Acephate Technical has been shown to have a weak potential to cause mutations when tested at

high doses in microbes or cultured cells. However, the results of most in vivo assays indicate that Acephate Technical does not cause mutations in whole animals. Overall, Acephate is not

considered to be a mutagenic hazard.

Carcinogenicity There was an increase in liver carcinoma and adenoma observed in female mice only when fed

diets containing the highest dose level of Acephate Technical throughout their entire lifetime. Male mice and rats showed no carcinogenic effects at any dose level tested. EPA has classified

Acephate as a Group C (possible human carcinogen).

Result: carcinoma & adenoma

Species: female mice Organ: liver Result: no effects Species: Male mice, rats

IARC Monographs. Overall Evaluation of Carcinogenicity

Hydrated amorphous silica (CAS 112926-00-8)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicityThis product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - Not classified.

single exposure

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

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results	
Acephate (O,S-Dimeth	nylacetylphosphora	midothioate) (CAS 30560-19-1)		
Aquatic				
Curataga	E050	Mateuflee (Dephase messa)	FO/1 40 have	

Crustacea EC50 Water flea (Daphnia magna) > 50 mg/l, 48 hours

Fish LC50 Rainbow trout,donaldson trout 2.36 - 3 mg/l, 96 hours (Oncorhynchus mykiss)

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

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Acephate (O,S-Dimethylacetylphosphoramidothioate) -0.85

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 instructionsCollect and reclaim or dispose in sealed containers at licensed waste disposal site. 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

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 local 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 methods/information).

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

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

Read safety instructions, SDS and emergency procedures before handling.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not establishe

Annex II of MARPOL 73/78 and

the IBC Code

Not established. Not applicable.

Material name: ORTHENE® Turf, Tree & Ornamental WSP

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

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. 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 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.

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 disposing of equipment washwater or rinsate. This product and its degradate are highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are 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

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Yes

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

Classified hazard

categories

Acute toxicity (any route of exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
Acephate (O,S-Dimethylacetylphosphoramidothioate)	30560-19-1	75	

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

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

952 Version #: 3.0 Revision date: Jul-09-2018 Issue date: May-17-2015

Country(s) or region Inventory name On inventory (yes/no)*

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*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 dateMay-17-2015Revision dateJul-09-2018

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 # 3.0

HMIS® ratings Health: 2

Flammability: 0 Physical hazard: 0

NFPA ratings Health: 2

Flammability: 0 Instability: 0

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

Revision information

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

Material name: ORTHENE® Turf, Tree & Ornamental WSP