TIDE INTERNATIONAL USA, INC.
--A DIVISION OF TIDE GROUP

REVISION DATE: 09/26/2017 VERSION 2.0

[1. Identification]

Product name:	Tide Azoxystrobin 2SC
Chemical name:	Methyl(E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl} -3-methoxyacrylate
Chemical family:	Strobilurin
EPA Reg. No.:	84229-47
Recommended Use:	Fungicide
Importer/Supplier:	Tide International USA, Inc. 21 Hubble, Irvine, CA 92618 (949) 679-3535 www.Tide-USA.com
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 (2012)

Classification of the substance or mixture:

Acute Oral (Category 5)
Acute Inhalation (Category 4)
Eye irritation (Category 2B)
Acute Aquatic Hazardous (Category 1)
Aquatic Chronic Toxicity (Category 1)

GHS label elements:

GHS pictograms

Signal Word: WARNING

GHS Hazard statements

H303 May be harmful if swallowed.
H332 Harmful if inhaled.
H320 Causes eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

Response:

P312 Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P391 Collect spillage.

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: Skin, eyes, mouth, lungs.

Carcinogenicity: No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.

Other health concerns:

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

[3. Composition / Information on Ingredients]

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

Active ingredient	CAS No.	Content (w/w, %)	ACIGH
Azoxystrobin	131860-33-8	23.2 min	NA
Propylene glycol	57-55-6	5.0	NA
Silica Filled Polydimethylsiloxane	NE		<1
Fatty Alcohol Ethoxylate	68131-39-5		<1
1,2-benzisothialin-3-one	2634-33-5		<1
Xanthan gum	1138-66-2		<1
Other ingredient deemed not to be hazardous	Proprietary	Balance	/

[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 inhaled: Remove person to fresh air and keep comfortable for breathing. Call an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a POISON CENTER or doctor if you feel unwell.

If on skin: Take off contaminated clothing and wash it before reuse. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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. If eye irritation persists: Get medical advice/attention.

If swallowed: Call a poison control center or doctor immediately for treatment advice. 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.

Most important symptoms/effects, acute and delayed: No information available.

Note to physician: There is no specific antidote, treatment symptomatically.

[5. Fire-Fighting measures]

Suitable extinguishing media: Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist. Cool closed containers exposed to fire with water spray. Do not use a solid water stream as it may scatter and spread the fire.

Unsuitable extinguishing media: No data available.

Special hazards arising from the chemical (hazardous combustion products): Can decompose at high temperatures forming toxic gases. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for fire-fighters: A self-contained breathing apparatus and suitable protective clothing must be worn in fire conditions.

Advice for firefighters: Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustions. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water run-off can cause environmental damage. If water is used to fight fire, dike and collect runoff.

[6. Accidental release measures]

Personal precautions, protective equipment and emergency procedures:

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

Environmental precautions: Do not apply directly to water except as specified on this label. 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. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Methods and materials for containment and cleaning up:

Pump or scoop large amounts of liquid into a disposable container. Absorb remaining liquid or smaller spills with clay, sand or vermiculite. Scoop or seep up material and place into a disposal container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into a compatible disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal.

Large spills should be handled according to a spill plan. Otherwise, in case of emergency call day or night, 1-800-424-9300.

[7. Handling and Storage]

KEEP OUT OF REACH OF CHILDREN!

Precautions for Safe Handling:

Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours, dust or spray mist. Wear full protective clothing and equipment (see Section 8). After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Protect product, wash or rinse water, and contaminated materials from uncontrolled release into the environment, or from access by animals, birds or unauthorized people.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in original container in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Refer to the product label for specific storage recommendations, including minimum storage temperature and freeze/thaw stability. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

[8. Exposure controls / Personal protection]

Control parameters:

Components.	CAS-No	Control parameters	Basis
Azoxystrobin	131860-33-8	NOT ESTABLISHED	N/A
Propylene glycol	57-55-6	10mg/m^3 (particulates)	UK HSE TWA, 8h

Appropriate Engineering Controls:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides(40 CRF 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for “applicators and other handlers” and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

Personal protective equipment:

Always follow the label instructions when handling this product. In all other cases the following recommendations would apply. Long sleeve shirt and long pants. Chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber. Shoes plus socks. Protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them. Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately

Respiratory protection: A combination particulate/ organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter.

Eye protection Use safety glasses or goggles, there is potential for vapor or mist exposure to cause injury to the eyes. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin and body protection: Skin and Body Protection: To avoid contact with skin, wear coveralls over with long- or short-sleeved shirt and long or short pants, chemical-resistant footwear plus socks and chemical resistant gloves. Wear chemical-resistant apron when cleaning equipment, mixing or loading. For overhead exposure, wear chemical-resistant headgear. An emergency eyewash or water supply should be readily accessible to the work area.

[9. Physical and chemical properties]

Appearance (physical state, color etc.): Off-white opaque liquid

Odor: A characteristic odor

Odor threshold: No data available

PH value: 6.0-8.0 (1 % w/v)

Melting point/freezing point: No data available

Initial boiling point and boiling range: Not applicable

Flash point: 116°C

Evaporation rate: No data available

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits: Not applicable

Vapor pressure: Azoxystrobin: 8.3 x 10-13 mmHg @ 20 °C.

Vapor density: No data available

Relative density: 1.076

Solubility(ies): Azoxystrobin: 6.7 mg/L @ 20 °C, pH 7 (water).

Partition coefficient: n-octanol/water: Azoxystrobin: 2.5

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: 865.0-195.0 mPa*s, 20°C; 689.3-158.2 mPa*s, 40°C

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, however may decompose if heated.

Possibility of hazardous reactions: Will not occur hazardous polymerization.

Conditions to avoid: Avoid temperatures above (115°F, 46°C) and high moisture.

Incompatible Materials: Oxidizing materials.

Hazardous decomposition products: Can decompose at high temperatures forming toxic gases.

[11. Toxicological information]

Acute toxicity data have been bridged from a very similar formulation containing a similar concentration of the active ingredient, azoxystrobin. The non-acute information pertains to the technical-grade active ingredient.

Exposure routes: Skin, eyes, mouth, lungs.

Azoxystrobin Technical:

Toxicity:

Acute toxicity:

Acute oral (rats): LD_{50} > 2000 mg/kg body weight (Rat).

Acute dermal (rabbits): LD_{50} > 5000 mg/kg body weight (Rat).

Acute inhalation (Rats): LC_{50} 1.58 mg/l - 4 hours (Rat).

Acute eye irritation (rabbits): Mildly irritating (Rabbit).

Acute dermal irritation (rabbits): Slightly irritating (Rabbit).

Skin sensitization (mice): Not a Sensitizer (Guinea Pig).

Reproductive/Developmental Effects: Shows weak chromosomal damage in mammalian cells at cytotoxic levels. Negative in whole animal assays for chromosomal and DNA damage at high dosages (> or = 2000 mg/kg). In rabbits, no effect was observed up to the highest dose level (500 mg/kg/day). In rats, developmental effects were seen only at maternally toxic doses (100 mg/kg/day).

Mutagenicity: Azoxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Chronic/Subchronic Toxicity Studies: In a rat 90-day feeding study, liver toxicity was observed at 2,000 ppm. This was manifest as gross distension of the bile duct, increased numbers of lining cells and inflammation of the duct. No toxicologically significant effects were seen in repeat dose dog studies. Data reviews do not indicate any potential for endocrine disruption. There is no evidence of neurotoxicity in any of the studies conducted with azoxystrobin.

Carcinogenicity: No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.

Toxicity of Other Components: Not available.

[12. Ecological information]

Ecotoxicity (Based on Azoxystrobin technical):

Fish toxicity:

96 hour LC_{50}, Rainbow trout – 470 ppb

96 hour LC_{50}, Bluegill – 1100 ppb

Avian toxicity:

Oral LD_{50}, Mallard duck - > 250 mg/kg

Birds (5-day dietary – Mallard Duck) LC_{50}/EC_{50} > 5,290 ppm

Aquatic invertebrates:

Green Algae 5-day EC_{50} 106ppb

Invertebrate (water flea) 48-hours EC_{50} 259 ppb

Bee toxicity: (technical) – LC_{50} > 200ug/bee

Persistence/Degradability: Not persistent in soil and stable in water.

Bio accumulative potential: Low potential.

Mobility in soil: Moderate mobility in soil.

Other adverse effects: Not applicable.

Environmental Precautions:

Do not apply directly to water except as specified on this label. 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. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

[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: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Disposal: Follow advice on product label and/or leaflet. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning.

[14. Transport information]

D.O.T.

UN number:	3082
Shipping Description:	Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin)
D.O.T. Hazard Class:	9
Packing group:	III
Marine pollutant (Yes/No):	Yes

IMDG/IMO

UN number:	3082
UN proper shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin)
Hazard Class:	9
Packing group:	III
Marine pollutant (Yes/No):	Yes

ICAO/IATA

UN number:	3082
UN proper shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin)
Hazard Class:	9
Packing group:	III
Environm. Hazardous Mark:	Not applicable.

[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.: 84229-47

EPA Signal word: Caution

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. 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. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

GROUND WATER ADVISORY

Azoxystrobin and a degradate of azoxystrobin are known to leach through soil to ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of azoxystrobin and a degradate of azoxystrobin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Notify State and/or Federal authorities and Tide International, USA, Inc. immediately if you observe any adverse environmental effects due to use of this product.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow coming into contact with oxidizing agent. Hazardous chemical reaction may occur.

US Federal Regulations

TSCA list: Exempt from TSCA, subject to FIFRA.

SARA Title III - Section 302 - notification and information: None

SARA Title III - Section 313 - toxic chemical release reporting: None

SARA Title III - Section 311/312 - hazard identification

Acute (immediate) Health Hazardous

This product contains none of the components listed as Extremely Hazardous substances.

US States Regulatory Reporting

CA Prop65

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

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

US State Right-To-Know Ingredients

CAS# 57-55-6 can be found on the following state right to know lists: Pennsylvania, Minnesota.

Canadian Regulations

All ingredients are on the inventory or exempt from Canadian's DSL list.

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

RCRA Classification: Not applicable

[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. Tide International USA, Inc. assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.