

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: Shield-Brite[®] Penbotec[™] 400 SC **EPA Reg #** 43813-32-64864
Product Code: 10182
Product Use: For Post Harvest Use on Pome Fruits
Supplier: Pace International, LLC
Address: 5661 Branch Road, Wapato, WA 98951
Phone Number: 800-936-6750 (Monday-Friday, 7:00 a.m. – 4:00 p.m.)
Medical Emergency Phone Number: 888-271-4649 (PROSAR)
Transportation Emergency Phone Number: 800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

Classification:
 Acute Aquatic Toxicity, Category 2
 Long Term Aquatic Toxicity, Category 2

Hazard Symbols:



Hazard Statements:

WARNING
 H401 Toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention Statements:
 P273 Avoid release to the environment.

Response Statements:
 P391 Collect spillage.

Disposal Statements:

P501 Dispose of contents/container should be made in accordance with applicable regional, national and local laws and regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Mixture / Ingredient</u>	<u>CAS #</u>	<u>Concentration (w/w %)</u>
Pyrimethanil (ISO)	53112-28-0	>=30 % - <50 %
Other ingredients		balance

4. FIRST AID MEASURES

General Have the product container, label or Safety Data Sheet with you when calling a poison control center or physician, or going for treatment.

Advice:

If on Skin: Take off contaminated clothing. Wash skin with plenty of soap and water for 15-20 minutes. If redness, burning, or irritation persists, get medical advice/attention. Wash contaminated clothing before reuse.

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. Get medical advice/attention.

If Swallowed: Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

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

Notes to physician Treat symptomatically.



5. FIRE FIGHTING MEASURES

Extinguishing Media:	Use water mist, dry powder, foam, carbon dioxide (CO ₂), sand, or aqueous film forming foam. Can cool containers with water spray.
Unsuitable extinguishing media:	Water spray jet
Specific hazards during fire-fighting:	Heating can release hazardous gases, carbon oxides. Do not allow run-off from firefighting to enter drains or water courses.
Hazardous combustion products:	Carbon oxides
Special Protective Equipment / Procedures for Firefighters:	Wear self-contained breathing equipment and fire resistant personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Evacuate personnel to safe areas. Keep away from open flames, hot surfaces and sources of ignition.
Environmental Precautions:	In case of spill isolate area and deny entry to unnecessary personnel. Do not allow product to enter sewers, lakes, streams or other bodies of water.
Containment / Clean-Up Methods:	Stop spill at the source. Construct temporary dikes of dirt, sand, or other appropriate material to prevent spreading of the material. Absorb with an inert material such as sand or vermiculite and place in an appropriate container for disposal.

7. HANDLING & STORAGE

Handling:	Avoid contact with skin and eyes. Good standards of hygiene should be maintained at all times. Ensure all equipment is electrically grounded before beginning transfer operations. To avoid thermal decompositions, do not overheat. Keep away from open flames, hot surfaces and sources of ignition. For personal protection see Section 8.
Storage:	Store in a cool, dry area at room temperature and away from direct sunlight. Keep in original container and tightly closed when not in use. Keep out of reach of children and livestock. Store away from heat and sources of ignition. Keep away from food and drink, as well as other feeding supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:	Contains no substances with occupational exposure limit values.
Engineering Controls:	Local exhaust ventilation maybe necessary to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Provide mechanical ventilation for confined spaces.

Personal Protective Equipment :



Clothing: Wear impermeable clothing such as long-sleeved shirt, long pants, shoes, socks and chemical resistant gloves.

Eye Protection: Wear safety glasses. Eye fountain and washing facilities should be present at work area.

Respiratory Protection: Not normally required under normal treatment at room temperature. In dusty or misty environments, use a NIOSH-approved organic vapor acid gas cartridge respirator with any N, P, R, or HE pre-filter.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical:	Liquid suspension	Upper/Lower flammability limits:	Not applicable
Appearance:	Opaque, white	Vapor pressure:	Not available
Odor:	Very faint characteristic	Vapor density: (air =1)	Not available
Odor threshold:	Not available	Specific Gravity: (H₂O = 1)	1.075 (20°C)
pH:	7.76	Solubility:	Dispersible



Melting/Freezing point:	Not applicable	Partition coefficient (n-octanol-water):	Not available
Boiling point:	Not applicable	Auto-ignition temperature:	479°C
Flash point:	>93°C	Decomposition temperature:	Not available
Evaporation rate:	Not available	Viscosity:	91 – 991 mPa.s (20°C) 53 – 307 mPa.s (40°C)
Flammability (solid, gas):	Not available	Explosive properties:	Not explosive
		Oxidizing properties:	Not oxidising (not expected to be oxidising based on components)

10. STABILITY & REACTIVITY

Reactivity hazards:	None known
Chemical stability:	Stable under recommended storage conditions
Possibility of hazardous reactions:	No dangerous reaction known under conditions of normal use.
Conditions to avoid:	To avoid thermal decomposition, do not overheat. Avoid heat, flames, sparks, exposure to direct sunlight.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon oxides, nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity of Product:	Acute Oral: LD ₅₀ : > 2000 mg/kg (Rat, male and female)
	Acute Dermal: LD ₅₀ (Rat): > 2000 mg/kg Method: OECD Test Guideline 402
	Inhalation: LC ₅₀ (Rat) : > 0.98 mg/L Exposure Time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity.
	Skin corrosion/irritation: Species: Rabbit Method: OECD Test Guideline 404 Result: No skin irritation
	Serious eye damage/eye irritation: Species: Rabbit Method: OECD Test Guideline 405 Result: No eye irritation
	Respiratory or skin sensitization: Species: Guinea pig Method: Guinea pig maximization assay (GPMT) (OECD 406) Result: Does not cause skin sensitization
	Germ Cell Mutagenicity: Genotoxicity in vitro: No data available
	Carcinogenicity: No Data Available
	Reproductive Toxicity: Effects on fertility: no data available Effects on fetal development: no data available
	STOT – single exposure: No data available
	STOT – repeated exposure: No data available
	Repeated Dose toxicity: No data available

Acute toxicity of Ingredient: Pyrimethanil (ISO)	Pyrimethanil (ISO)
	Acute Oral: LD ₅₀ (Rat): 4150 mg/kg
	Acute Dermal: LD ₅₀ (Rat): > 5000 mg/kg Method: OECD Test Guideline 402
	Inhalation: LC ₅₀ (Rat): > 1.98 mg/L Exposure Time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity.



Skin corrosion/irritation:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation:

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Respiratory or skin sensitization:

Test Type: Maximization Test (GPMT)
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a sensitizer

Germ Cell Mutagenicity:

Genotoxicity in vitro: In vitro tests did not show mutagenic effects
Germ Cell Mutagenicity Assessment: Test on bacterial or mammalian cell cultures did not show mutagenic effects

Carcinogenicity: Animal testing did not show any carcinogenic effects

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

Reproductive Toxicity:

Effects on fertility: fertility and developmental toxicity tests did not reveal any effect on reproduction.

Effects on fetal development: did not show teratogenic effects in animal experiments.

Reproductive toxicity: Animal testing did not show any effects on fertility.

Teratogenicity assessment: Animal testing did not show any effects on fetal development.

STOT – single exposure: No data available

STOT – repeated exposure: No data available

Repeated Dose toxicity: No adverse effect has been observed in chronic toxicity tests.

Aspiration toxicity: No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

Toxicity:	LC50 (Oncorhynchus mykiss(rainbow trout) 41.6 mg/l Exposure time 96 hr EC50 (Daphnia(water flea)):6.73 mg/l Exposure time 48 hr EC50 (Pseudokirchneriella subcapitata (green algae)): 10.5 mg/l Exposure time 72 hr	Based on Product
	Pyrimethanil (ISO) LC50 (Oncorhynchus mykiss(rainbow trout) 10.56 mg/l Exposure time 96 hr EC50 (Daphnia(water flea)):2.9 mg/l Exposure time 48 hr EC50 (Pseudokirchneriella subcapitata (green algae)): 1.2 mg/l Exposure time 96 hr EC50 (activated sludge) 360 mg/l Exposure time 3 hr LC50 (Eisenia fetida (earthworms)) 625 mg/kg Exposure time 14 days LC50 (Colinus virginianus (Bobwhite quail)) >2000 mg/kg	Based on Ingredient
Persistence/ degradability:	Product: not available Pyrimethanil (ISO) Result: not readily biodegradable, Method: OECD Test Guideline 301B	
Bioaccumulative potential:	Product: not available Pyrimethanil (ISO) Result: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.	
Partition coefficient: n-octanol/water	Log Pow: 2.84	
Mobility in soil:	pH: 6.1 Not data available	



Other adverse effects:	Very toxic to aquatic life with long lasting effects.
Results of PBT and vPvB Assessment:	This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT)
Ozone-Depletion Potential:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone-CAA Section 602 Class 1 Substances-this product neither contains, nor was manufactured with a Class 1 or Class 11 ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

13. DISPOSAL CONSIDERATIONS

Disposal methods:	<p>Container disposal:>= 55 gallons in size. Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.</p> <p>For containers <= 5 gallons in size. Empty the remaining con-tents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow be-gins to drip. Repeat this procedure two more times.</p>
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14. TRANSPORT INFORMATION

	<u>DOT</u>	<u>IMDG</u>	<u>IATA</u>
UN number:	UN 3082	UN 3082	UN 3082
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s.(pyrimethanil)	Environmentally hazardous substance, liquid, n.o.s.(pyrimethanil)	Environmentally hazardous substance, liquid, n.o.s.(pyrimethanil)
Hazard class(es):	9	9	9
Packing group:	III	III	III
Labels:	9	9	9
Guidebook Number Environmentally hazardous:	No		No
EmS Number 1		F-A	
EmS Number 2		S-F	
Packing Instruction (CAO):			964
Packing Instruction (PAX and CAO):			964
Packing Instruction (LQ)			Y964
Packing Instruction (EQ)			E1
Marine Pollutant:		Yes	
Special precautions:	None		
Emergency Response:	171		
Transport in bulk according to Annex II or MARPOL 73/78 and the IBC Code			
Pollution Category:			
Ship Type:			

15. REGULATORY INFORMATION

EPCRA	Emergency Planning and Community Right-to-Know Act		
SARA 302:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.		
SARA 313:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III,Section 313		
Clean Air Act:	<p>This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A+B).</p> <p>This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).</p> <p>Tis product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).</p> <p>This product does not contain any chemicals listed under the U.S. Clean Air Act Section III SOCMl Intermediate or Final VOC's (40 CFR 60.489)</p>		
Clean Water Act:	<p>This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.</p> <p>This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.</p>		
Massachusetts Right to Know	No components are subject to the Massachusetts Right to Know Act.		
Pennsylvania Right	Alcoxylated alcohol	CAS# Not assigned	50 – 70 %



to Know	Pyrimethanil (ISO)	CAS# 53112-28-0	30 – 50 %
	Sodium propionate	CAS# 137-40-6	1 – 5 %
New Jersey Right to Know	Alcoxylated alcohol	CAS# Not assigned	50 – 70 %
	Pyrimethanil (ISO)	CAS# 53112-28-0	30 – 50 %
	Sodium propionate	CAS# 137-40-6	1 – 5 %
California Prop 65	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.		
FIFRA:	Shield-Brite® Penbotec 400 SC is registered as a pesticide with the U.S. EPA under registration number 43813-32-64864.		
The components of this product are reported in the following inventories:	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 or non-pesticide chemicals. Following is the hazard information as required on the pesticide label:		
	: Caution		
	: Harmful if swallowed, inhaled, or absorbed through the skin.		
	: Avoid contact with skin, eyes or clothing.		
	: Prolonged or frequently repeated skin contact may cause allergic reactions.		
	: Avoid breathing spray mist.		
Inventories:	AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)		

16. OTHER INFORMATION

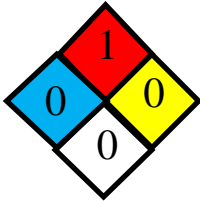
HMIS Ratings:

Health – 0

Flammability – 1

Reactivity – 0

NFPA Ratings:



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This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

SDS preparation date: August 21, 2017

Replaces MSDS dated: May 3, 2016

Changes since last revision: Minor changes, Section 3, 4, 5, 6, 7, 9, 10, 12, 13 and 15

