BRAVO WeatherStik®

1. PRODUCT IDENTIFICATION

   Product identifier on label: BRAVO WeatherStik®
   Product No.: A12531B
   Use: Fungicide
   Manufacturer: Syngenta Crop Protection, LLC
   Post Office Box 18300
   Greensboro NC 27419
   Manufacturer Phone: 1-800-334-9481
   Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

   Classifications:
   Oral: Category 4
   Inhalation: Category 3
   Skin Sensitizer: Category 1B
   Carcinogenicity: Category 2
   Specific Target Organ Toxicity: Respiratory Irritation Category 3

   Signal Word (OSHA): Danger

   Hazard Statements:
   Harmful if swallowed
   May cause an allergic skin reaction
   Toxic if inhaled
   May cause respiratory irritation
   Suspected of causing cancer

   Hazard Symbols:

   Precautionary Statements:
   Wash hands and face thoroughly after handling.
   Do not eat, drink or smoke when using this product.
   If swallowed: Call a poison center, doctor or Syngenta if you feel unwell. Rinse mouth.
   Obtain special instructions before use.
   Do not handle until all safety precautions have been read and understood.
   Use only outdoors or in a well-ventilated area.
   Contaminated work clothing must not be allowed out of the workplace.
   Wear protective gloves, protective clothing, eye protection.
   If on skin: Wash with plenty of soap and water.
   If skin irritation or rash occurs: Get medical advice.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
Call a poison center, doctor or Syngenta if you feel unwell.
See Section 4 First Aid Measures.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol</td>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>Silica, amorphous</td>
<td>112926-00-8</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>Other ingredients</td>
<td>Trade Secret</td>
<td>46.0%</td>
</tr>
<tr>
<td>Tetrachloroisophthalonitrile</td>
<td>Chlorothalonil</td>
<td>1897-45-6</td>
<td>54.0%</td>
</tr>
</tbody>
</table>

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:
- Allergic skin reaction
- Respiratory irritation

Indication of immediate medical attention and special treatment needed:
- There is no specific antidote if this product is ingested.
- Treat symptomatically.
- Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.
5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:
Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:
Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:
Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:
Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:
Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:
Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene Glycol</td>
<td>Not Established</td>
<td>Not Established</td>
<td>10 mg/m³ TWA</td>
<td>AIHA</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>80 mg/m³/% SiO₂ TWA</td>
<td>Not Established</td>
<td>6 mg/m³ TWA</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Chlorothalonil</td>
<td>Not Established</td>
<td>Not Established</td>
<td>0.1 mg/m³ TWA</td>
<td>Syngenta</td>
</tr>
</tbody>
</table>

Appropriate engineering controls:
Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:
Ingestion:
Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:
Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact:
Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:
A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light gray liquid
Odor: Slight
Odor Threshold: Not Available
pH: 6.5 - 8.5
Melting point/freezing point: Not Applicable
Initial boiling point and boiling range: 212 °F
Flash Point (Test Method): Not Applicable
Flammable Limits (% in Air): Not Available
Flammability: Not Applicable
Vapor Pressure: Chlorothalonil 0.00000057mmHg @ 77°F (25°C)
Vapor Density: Not Available
Relative Density: 1.34 g/ml (water = 1)
Solubility (ies): Chlorothalonil 0.81 mg/l @ 77°F (25°C)
Partition coefficient: n-octanol/water: Not Available
Autoignition Temperature: Not Applicable
Decomposition Temperature: Not Available
Viscosity: Not Available
Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.
Chemical stability: Stable under normal use and storage conditions.
Possibility of hazardous reactions: Material is not known to polymerize.
11. TOXICOLOGICAL INFORMATION

Health effects information
Likely routes of exposure: Dermal, Inhalation
Symptoms of exposure: Respiratory irritation
Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Allergic skin reaction, Respiratory system effects

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion: Oral (LD50 Female Rat) : 2000 mg/kg body weight
Dermal: Dermal (LD50 Rat) : > 2000 mg/kg body weight
Inhalation: Inhalation (LC50 Rat) : > 0.704 mg/l air - 4 hours
Eye Contact: Moderately Irritating (Rabbit)
Skin Contact: Mildly Irritating (Rabbit)
Skin Sensitization: A skin sensitizer.

Reproductive/Developmental Effects
Chlorothalonil: Did not show reproductive toxicity effects in animal experiments. Did not show teratogenic effects in animal experiments.

Chronic/Subchronic Toxicity Studies
Chlorothalonil: In dogs, 1 year administration caused a significant decrease in body weight gain and increases in absolute liver and kidney weights.
Neurotoxicity: No evidence in regulatory studies.

Carcinogenicity
Chlorothalonil: Chlorothalonil causes kidney tumors in rats and mice via a nongentoxic mode of action secondary to target organ toxicity. Did not show mutagenic effects in animal experiments. IARC identifies chlorothalonil as a 2B carcinogen (possibly carcinogenic to humans).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol</td>
<td>No</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>IARC Group 3</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>No</td>
</tr>
<tr>
<td>Tetrachloroisophthalonitrile</td>
<td>IARC Group 2B</td>
</tr>
</tbody>
</table>

Other Toxicity Information
Studies on rats and mice have suggested that technical chlorothalonil (97%), when fed at high levels in the diet, may
have oncogenic potential to these laboratory animals. However, neither chlorothalonil nor its metabolites interact with DNA and thus are not mutagenic. Tumor formation has been related to a non-genotoxic mechanism of action for which threshold levels have been established in rats and mice. Comprehensive dietary and worker exposure studies have shown exposure levels for humans to be well below these threshold levels. In addition, surveillance of chlorothalonil plant workers for over twenty years has not demonstrated any increase in oncogenic potential to humans.

Additional Toxicity Information:
May cause irritation of the gastrointestinal tract following ingestion of large amounts.

Mildly irritating to skin. Material rarely causes an allergic reaction.

May be irritating to the respiratory tract. This is rarely observed.

Material is not readily absorbed through intact skin.

**Toxicity of Other Components**

Other ingredients
Not Established

Propylene Glycol
Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea. Also, eye irritation may occur with lacrimation but no residual discomfort or injury. Prolonged contact to skin may cause mild to moderate irritation and possible allergic reactions. Chronic dietary exposure caused kidney and liver injury in experimental animals.

Silica, amorphous
Dusts in high concentrations may cause skin, eye and respiratory tract irritation.

**Target Organs**

**Active Ingredients**
Chlorothalonil: Lung, kidney

**Inert Ingredients**
Other ingredients: Not Established

Propylene Glycol: CNS, kidney, liver

Silica, amorphous: Skin, eye, respiratory tract

12. **ECOLOGICAL INFORMATION**

**Eco-Acute Toxicity**

Chlorothalonil:
- Green Algae 5-day EC50 190 ppb
- Bird (Mallard Duck) LD50 Oral > 4640 mg/kg
- Invertebrate (Water Flea) 48-hour EC50 70 ppb
- Fish (Rainbow Trout) 96-hour LC50 47 ppb

**Environmental Fate**

Chlorothalonil:
The information presented here is for the active ingredient, chlorothalonil.
Low bioaccumulation potential. Not persistent in soil or water. Low mobility in soil. Sinks in water (after 24 h).
13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable
Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification
Ground Transport - NAFTA
Non-Bulk: Not regulated
Tank Truck:
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III

Comments
Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III

Air Transport
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil)
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

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. Following is the hazard information as required on the pesticide label:

Caution: Harmful if swallowed, absorbed through skin, or inhaled. Causes moderate eye irritation. Avoid contact with skin, eye, or clothing. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

EPA Registration Number(s):
50534-188-100

EPCRA SARA Title III Classification:
Section 311/312 Hazard Classes: Acute Health Hazard
Chronic Health Hazard

Section 313 Toxic Chemicals: Chlorothalonil 54.0% (CAS No. 1897-45-6)
Safety Data Sheet

BRAVO WeatherStik®

Date: 5/13/2016
Replaces: 6/9/2015

California Proposition 65:
This product contains a chemical known to the State of California to cause cancer.

CERCLA/SARA 304 Reportable Quantity (RQ):
None

RCRA Hazardous Waste Classification (40 CFR 261):
Not Applicable

TSCA Status:
Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA Hazard Ratings</th>
<th>HMIS Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health:</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Flammability:</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Instability:</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Syngenta Hazard Category: D,S

For non-emergency questions about this product call:
1-800-334-9481

Original Issued Date: 1/8/2001
Revision Date: 5/13/2016
Replaces: 6/9/2015
Section(s) Revised: 11

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.