1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Floramite® SC

Chemical name: Bifenazate Acaricide

Supplier: Crompton Corporation
199 Benson Road
Middlebury, CT 06749, USA

Emergency telephone number: CHEMTREC (24 hours) 800-424-9300
Crompton Corporation Emergency Response (24 hours) 800-292-5898

For MSDS, Product Safety, or regulatory inquiries, call: 866-430-2775

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS#</th>
<th>CONCENTRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bifenazate</td>
<td>149877-41-8</td>
<td>22.6%</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!
MAY CAUSE EYE IRRITATION.
MAY CAUSE SKIN SENSITIZATION.

4. FIRST AID MEASURES

Swallowing
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.

Skin
Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation
Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Eye contact
Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

5. FIRE-FIGHTING MEASURES

Flash point: 104 °C

Flammable limits
Lower limit: Not applicable
Upper limit: 

Autoignition temperature: > 400 °C

Special fire fighting procedures
Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters
Body covering protective clothing, full "turn-out" gear. Self-contained breathing apparatus.

Extinguishing media
Suitable: Large fires:
- alcohol-type foam or universal-type foams
Small fires:
- CO2
- dry chemical

Unsuitable: - water jets

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear suitable protective equipment. Avoid contact with eyes and skin.

Environmental precautions
Prevent from entering sewer system, surface water or soil.

Methods for cleaning up
Observe government regulations.

Small spills
Absorb on inert material such as sand, earth, vermiculite.
Collect for disposal.
Large spills  Dike to contain spill.
Pump excess material into suitable container (metal drums, metal tank, or such).

7. HANDLING AND STORAGE

HANDLING
Handling precautions
Do not get in eyes. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Use with adequate ventilation. Wash thoroughly after handling.

Other precautions
NOTE TO END-USERS: The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.

STORAGE
Storage requirements
Store in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION
Respiratory protection
Self-contained breathing apparatus in high vapor concentrations.

Hand protection / protective gloves
Chemical resistant protective gloves

Eye protection
Safety glasses with side shields.

Skin protection
Wear protective clothing, such as long sleeves to minimize skin contact.

Other protective equipment
Eye bath
Safety shower

ENGINEERING CONTROLS
Ventilation
General (mechanical) room ventilation is expected to be satisfactory.
Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

EXPOSURE LIMITS
No exposure limits have been established
9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Off-white to light tan</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
</tbody>
</table>

OTHER PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>6.9</td>
</tr>
<tr>
<td>Density</td>
<td>1.061 g/cm³</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Dispersible</td>
</tr>
<tr>
<td>Solubility in organic solvents</td>
<td>Miscible with organic solvents</td>
</tr>
<tr>
<td>Evaporation rate (Butyl Acetate=1)</td>
<td>Similar to water</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;104 °C</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>&gt; 400 °C</td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>83 mPa.s</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Surface tension</td>
<td>42.1 dyn/cm at 25 °C</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: This product is stable under normal storage and handling conditions.

Incompatible materials

- Strong acids.
- Strong bases.
- Oxidizing agents.

Hazardous combustion products

- Irritating fumes.
- Oxides of carbon.
- Oxides of nitrogen.
**Product name:** Floramite® SC

**Hazardous polymerization:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Component toxicology</th>
<th>LD50 - Rat</th>
<th>Result: &gt; 5,000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity - Swallowing:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component toxicology</th>
<th>LD50 - Rabbit</th>
<th>Result: &gt; 5,000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity - Skin absorption:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component toxicology</th>
<th>LC50 - Rat</th>
<th>Result: &gt; 4.4 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity - Inhalation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure time: 4 h</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component toxicology</th>
<th>Species: Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
</tr>
<tr>
<td>Skin irritation - Skin contact:</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 4 h</td>
<td></td>
</tr>
<tr>
<td>Classification: Not irritant</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component toxicology</th>
<th>Species: Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
</tr>
<tr>
<td>Eye irritation - Eye contact:</td>
<td></td>
</tr>
<tr>
<td>Classification: Not irritant</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component toxicology</th>
<th>Species: - Guinea pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
</tr>
<tr>
<td>Test results - Sensitization:</td>
<td></td>
</tr>
<tr>
<td>Result: Positive</td>
<td></td>
</tr>
</tbody>
</table>

**Component (Bifenazate):** Negative

**Component (Bifenazate):** Negative

**Toxicity to reproduction/fertility**

**Component (Bifenazate):** Negative

### 12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Component ecotoxicology</th>
<th>LC50 - Rainbow trout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity fish:</td>
<td>Result: 0.58 mg/l</td>
</tr>
<tr>
<td>Exposure time: 96 h</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component ecotoxicology</th>
<th>LC50 - Bluegill</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bifenazate</strong></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations. Avoid discharge to sewers and natural waters.

Non-cleaned packages
Empty drums should be decontaminated and either passed to an approved drum reconditioner or destroyed. Containers that cannot be cleaned must be treated as waste.

14. TRANSPORT INFORMATION

DOT Classification
Not regulated by ground or rail if shipped or transported in containers less than 450 liters.
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class: 9
UN ID #: UN3082
Packing group: III
marine pollutant: MARINE POLLUTANT

Not regulated by ground or rail if shipped or transported in containers less than 450 liters.

IMDG Classification
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Class: 9
Subsidiary risk: marine pollutant
UN ID #: UN 3082
Packing group: III

ICAO Classification
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Class: 9
UN ID #: UN 3082
Packing group: III
15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ’s) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS’s that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Massachusetts Right-To-Know Substance List (MSL)--Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

For New Jersey Worker and Community Right-To-Know Act (Labeling Requirements) information please contact the Product Safety and Regulatory Affairs Department of the Crompton Corporation.

EPA Hazard Categories (SARA 311, 312):

Immediate Health Hazard

California Proposition 65

**** NONE ****

16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS

NOTE TO END-USERS: This MSDS is being provided to all interested persons in accordance with federal and state right-to-know laws. Precautionary Statements, First Aid Statements and Directions for Use of this product by end-users are contained on the product label and must be followed at all times.

FURTHER INFORMATION

MAY BE ON THE INVENTORY LIST BUT NOT NECESSARILY REGISTERED, (Korea, China, New Zealand)

CONSULT REGULATORY SPECIALIST.
**LEGEND**

<table>
<thead>
<tr>
<th>STP</th>
<th>Standard temperature and pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>W/W</td>
<td>Weight/Weight</td>
</tr>
<tr>
<td>0 (HMIS)</td>
<td>Minimal hazard</td>
</tr>
<tr>
<td>1 (HMIS)</td>
<td>Slight hazard</td>
</tr>
<tr>
<td>2 (HMIS)</td>
<td>Moderate hazard</td>
</tr>
<tr>
<td>3 (HMIS)</td>
<td>Serious hazard</td>
</tr>
<tr>
<td>4 (HMIS)</td>
<td>Severe hazard</td>
</tr>
<tr>
<td>X (HMIS)</td>
<td>Personal protection rating to be supplied by user depending on use conditions</td>
</tr>
</tbody>
</table>

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