SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: GAUCHO® SB FLOWABLE
MSDS Number: 102000012787
EPA Registration No.: 264-957

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid</td>
<td>138261-41-3</td>
<td>40.70</td>
</tr>
<tr>
<td>Ethanediol</td>
<td>107-21-1</td>
<td>11.40</td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Caution! Harmful if swallowed, inhaled or absorbed through the skin. Do not breathe vapours or spray mist.

Physical State: liquid suspension
Appearance: light cream
Routes of Exposure: Inhalation, Ingestion, Skin Absorption, Eye contact, Skin contact

Immediate Effects:
Eye: May cause mild irritation to eyes. Do not get in eyes.
Skin: Harmful if absorbed through skin. Avoid contact with skin and clothing.
Ingestion: Harmful if swallowed. Do not take internally.
Inhalation: Inhalation may cause irritation of nasal passages. Harmful if inhaled. Do not breathe vapours or spray mist.

Chronic or Delayed Long-Term: This product or its components may have target organ effects.
### Potential Environmental Effect

Highly toxic to aquatic invertebrates. Highly toxic to birds.

### SECTION 4. FIRST AID MEASURES

<table>
<thead>
<tr>
<th>General</th>
<th>When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>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. Call a physician or poison control center immediately.</td>
</tr>
<tr>
<td>Skin</td>
<td>Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.</td>
</tr>
</tbody>
</table>

### Notes to Physician Treatment

There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

### SECTION 5. FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Flash point</th>
<th>&gt; 93.4 °C / &gt; 200.1 °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire and Explosion Hazards</td>
<td>In the event of fire the following can be released: hydrogen chloride (HCl) nitrogen oxides (NOx)</td>
</tr>
<tr>
<td>Suitable Extinguishing Media</td>
<td>Foam, Carbon dioxide (CO2), Dry chemical, Water spray</td>
</tr>
<tr>
<td>Fire Fighting Instructions</td>
<td>Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</td>
</tr>
</tbody>
</table>
SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Methods for Cleaning Up
Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice
Use personal protective equipment.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
Handle and open container in a manner as to prevent spillage.
Keep away from heat and sources of ignition.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove soiled and/or soaked clothing immediately and clean thoroughly before using again. Then wash thoroughly and put on clean clothing.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. As soon as practical, wash thoroughly and change into clean clothing.

Min/Max Storage Temperatures
Do not transport or store below 5 °C / 41 °F
Do not transport or store above 40 °C / 104 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Follow all label instructions. Train employees in safe use of the product.
Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.
Engineering Controls
Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Eye/Face Protection
Tightly fitting safety goggles

Hand Protection
Chemical resistant nitrile rubber gloves

Body Protection
Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection
When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>OSHA Z1A</th>
<th>US CA OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>107-21-1</td>
<td>Ceiling</td>
<td>Ceiling</td>
</tr>
<tr>
<td>Form of exposure</td>
<td>Aerosol.</td>
<td>50 ppm</td>
<td>40 ppm</td>
</tr>
<tr>
<td>Form of exposure</td>
<td>Vapor.</td>
<td>125 mg/m³</td>
<td>100 mg/m³</td>
</tr>
</tbody>
</table>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
light cream

Physical State
liquid suspension

pH
7.0 - 9.0 (undiluted)

Density
approx. 1.19 g/cm³ at 20 °C

Bulk Density
9.7 - 10.2 lb./gal.

Boiling Point
> 100 °C / > 212 °F

Melting / Freezing Point
-9.4 °C / 15.1 °F

Water solubility
miscible

Viscosity
400 - 900 mPa.s

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability
Stable under recommended storage conditions.

Conditions to Avoid
Extremes of temperature and direct sunlight. freezing
 SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have been bridged from a very similar formulation of GAUCHO 480 Flowable. The non-acute information pertains to the technical-grade active ingredient, imidacloprid.

**Acute Oral Toxicity**
- male rat: LD50: 4,690 mg/kg
- female rat: LD50: 4,070 mg/kg

**Acute Dermal Toxicity**
- male/female combined rabbit: LD50: > 5,050 mg/kg

**Acute Inhalation Toxicity**
- male/female combined rat: LC50: 2.1 mg/l
  - Exposure time: 4 h
  - Determined in the form of liquid aerosol.
  - (actual)
- male/female combined rat: LC50: 8.4 mg/l
  - Exposure time: 1 h
  - Determined in the form of liquid aerosol.
  - Extrapolated from the 4 hr LC50.
  - (actual)

**Skin Irritation**
- rabbit: No skin irritation.

**Eye Irritation**
- rabbit: Minimally irritating.

**Sensitization**
- guinea pig: Non-sensitizing.

**Chronic Toxicity**
Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

**Assessment Carcinogenicity**
Imidacloprid was not carcinogenic in studies in rats and mice.

**ACGIH**
- Ethanediol: 107-21-1, Group A4

**NTP**
None.

**IARC**
None.

**OSHA**
None.

**Reproductive & Developmental Toxicity**
REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY: Imidacloprid is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.
Neurotoxicity

Imidacloprid showed slight behavioral and activity changes only at the highest dose tested in neurotoxicity studies in rats. There were no correlating morphological changes observed in the neural tissues.

Mutagenicity

Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

Ecological Information

Exposed treated seed may be hazardous to birds.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Open dumping is prohibited. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not regulated for Domestic Surface Shipment

FREIGHT CLASSIFICATION:
Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION

EPA Registration No.

264-957

US Federal Regulations
TSCA list

Ethanediol 107-21-1
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
- Ethanediol 107-21-1 1.0%

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
- Ethanediol 107-21-1 CA, IL, MN, NJ, PA, RI

Canadian Regulations
Canadian Domestic Substance List
- Ethanediol 107-21-1

Environmental
CERCLA
- Ethanediol 107-21-1 5,000 lbs

Clean Water Section 307 Priority Pollutants
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations
European Inventory of Existing Commercial Substances (EINECS)
- Ethanediol 107-21-1

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
- Health - 2
- Flammability - 0
- Reactivity - 0
- Others - none
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Update Section 11: Toxicological Information and Section 14: Transport Information.

Revision Date: 02/07/2007

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