SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: BAYER ADVANCED 12 MONTH TREE & SHRUB INSECT CONTROL SUPER CONCENTRATE

MSDS Number: 102000015684
EPA Registration No.: 72155-56

Bayer Environmental Science
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: 1-800-331-2867

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>2.94</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview: Caution! Moderate eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

Physical State: suspension

Appearance: white to off-white

Routes of Exposure: Eye contact, Skin contact, Inhalation, Ingestion

Immediate Effects:
- **Eye**: Moderate eye irritation. Do not get in eyes.
- **Skin**: Avoid contact with skin and clothing.
- **Ingestion**: Do not take internally.
- **Inhalation**: Avoid breathing spray mist.
### SECTION 4. FIRST AID MEASURES

**General**
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Eye**
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.

**Skin**
Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

**Ingestion**
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.

**Inhalation**
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.

**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

**Flash point**
> 93 °C / 199 °F

**Suitable Extinguishing Media**
water spray, carbon dioxide (CO2), dry chemical, foam

**Fire Fighting Instructions**
Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
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. Do not allow product to enter streams, sewers or other waterways.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
Keep away from food, drink and animal feeding stuffs. Food utensils such as teaspoons or measuring cups must not be used for food purposes after use in measuring pesticides.

Storing Procedures
Do not freeze. Store in a cool, dry secured storage area. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.

Avoid inhalation of vapour or mist. Avoid contact with skin and eyes.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Do not allow children or pets to enter the treated area until it has dried.

Exposure Limits

<table>
<thead>
<tr>
<th>Glycerine 56-81-5</th>
<th>ACGIH Form of Exposure</th>
<th>TWA</th>
<th>Glycerine 56-81-5</th>
<th>OSHA Z1 Form of Exposure</th>
<th>PEL</th>
<th>TWA</th>
<th>OSHA Z1A Form of Exposure</th>
<th>TWA</th>
<th>Respirable fraction</th>
<th>5 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mist.</td>
<td></td>
<td></td>
<td>Respirable fraction.</td>
<td></td>
<td></td>
<td>Total dust.</td>
<td></td>
<td>15 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z1A</td>
<td></td>
<td></td>
<td>Total dust.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td></td>
</tr>
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</table>
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>white to off-white</td>
</tr>
<tr>
<td>Physical State</td>
<td>suspension</td>
</tr>
<tr>
<td>pH</td>
<td>4.5 - 6.0 (undiluted)</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1.04 g/cm³ at 20 °C</td>
</tr>
</tbody>
</table>

SECTION 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>freezing</td>
</tr>
</tbody>
</table>

SECTION 11. TOXICOLOGICAL INFORMATION

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

**Acute Oral Toxicity**
- male rat: LD50: > 4,870 mg/kg
- female rat: LD50: 4,143 mg/kg

**Acute Dermal Toxicity**
- male/female rabbit: LD50: > 2,000 mg/kg

**Acute Inhalation Toxicity**
- male/female rat: LC50: > 5.3 mg/l
  - Exposure time: 4 h
  - Determined in the form of liquid aerosol.
- male/female rat: LC50: > 20 mg/l
  - Exposure time: 1 h
  - Determined in the form of liquid aerosol.
  - Extrapolated from the 4 hr LC50.

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

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

**Sensitization**
- guinea pig: Non-sensitizing.
Chronic Toxicity
In chronic dietary studies in rats and dogs exposed to imidacloprid, the target organs were the thyroids and/or liver.

Assessment Carcinogenicity
In oncogenicity studies in rats and mice, imidacloprid was not considered carcinogenic in either species.

ACGIH
None.
NTP
None.
IARC
None.
OSHA
None.

Reproductive & Developmental Toxicity
REPRODUCTION: In a two-generation reproduction study in rats, imidacloprid was not a primary reproductive toxicant. Offspring exhibited reduced body weights at the high dose and in conjunction with maternal toxicity.

DEVELOPMENTAL TOXICITY: In developmental toxicity studies in rats and rabbits, there was no evidence of an embryotoxic or teratogenic potential for imidacloprid. In both species, developmental effects were observed only at high doses and in conjunction with maternal toxicity.

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

Mutagenicity
The imidacloprid mutagenicity studies, taken collectively, demonstrate that the active ingredient is not genotoxic or mutagenic.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions
Toxic to aquatic invertebrates. Do not apply directly to water. Apply this product as specified on the label. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance
It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.

Container Disposal
Do not re-use empty containers. Place empty container in trash.

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not regulated for transportation

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

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-56

US Federal Regulations
TSCA list
Glycerine 56-81-5
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 None.

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
Glycerine 56-81-5 IL, MN, RI

Canadian Regulations
Canadian Domestic Substance List
Glycerine 56-81-5

Environmental
CERCLA
None.

Clean Water Section 307 Priority Pollutants
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations
European Inventory of Existing Commercial Substances (EINECS)
Glycerine 56-81-5

SECTION 16. OTHER INFORMATION

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

Reason to Revise: Update inhalation toxicology data in Section 11.

Revision Date: 08/24/2006

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