



### Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

#### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name** Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use  
**Chemical Name**  
**Common Name**  
**MSDS Number** 2228  
**Chemical Family**  
**Chemical Formulation**  
**EPA Registration No.** 72155-28  
**Product Use** Insecticide, for use on: Flowers, Roses, Shrubs

Bayer Environmental Science  
 95 Chestnut Ridge Road  
 Montvale, NJ 07645  
 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

<u>Hazardous Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Imidacloprid Technical	138261-41-3	0.0100	0.0140
Beta-cyfluthrin Technical	68359-37-5	0.0012	0.0018

#### SECTION 3. HAZARDS IDENTIFICATION

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

**Emergency Overview** Caution! Harmful by inhalation and if swallowed. Causes eye irritation. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

**Physical State** Viscous Liquid  
**Appearance** Clear  
**Routes of Exposure** Ingestion, Inhalation, Skin contact  
**Immediate Effects**  
**Eye** Avoid contact with the eyes. Causes eye irritation.

# Material Safety Data Sheet

MSDS Number: 000000002228  
MSDS Version 1.0

## Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

Skin	No skin irritation
Ingestion	Harmful if swallowed. Do not take internally.
Inhalation	Harmful if inhaled. Avoid breathing spray mist.

### SECTION 4. FIRST AID MEASURES

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 poison control center or doctor for treatment advice.
Skin	Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
Ingestion	Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Have person sip a glass of water if able to swallow. Call a poison control center or doctor immediately for treatment advice.
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 poison control center or doctor for further treatment advice.

### SECTION 5. FIRE FIGHTING MEASURES

Flash Point	> 93.3 °C / > 199.9 °F
Suitable Extinguishing Media	Water, Foam, Dry chemical
Fire Fighting Instructions	Keep out of smoke. Equipment or materials involved in pesticide fires may become contaminated. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.  Wear self-contained breathing apparatus and protective suit.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal	Keep unnecessary people away, isolate hazard area and deny entry. Avoid contact with spilled product or contaminated surfaces.
Land Spill or Leaks	Avoid breathing vapors and avoid skin contact. Use personal protective equipment. Dike contaminated area with absorbent granules, soil, sand, etc. Carefully sweep up absorbed spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

# Material Safety Data Sheet

## Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

MSDS Number: 000000002228  
MSDS Version 1.0

### SECTION 7. HANDLING AND STORAGE

Handling Procedures	When using in animal quarters, do not apply directly to food, water or food supplements.
Storing Procedures	Keep tightly closed in a dry, cool and well-ventilated place. Store in original container and out of the reach of children, preferably in a locked storage area.  Do not freeze.

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	There are no known hazards associated with this product when used according to the label directions. At the same time, the following guidelines should be used.  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, or using the toilet.  Do not allow children and pets to enter the treated area until it has dried.
Exposure Limits	None Established

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear
Physical State	Viscous Liquid
pH	7.7 - 8.2 at 25 °C
Specific Gravity	1.00
Bulk Density	8.331 lbs/gal
Viscosity	2 mPa.s

### SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
--------------------	--

### SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies for this product have been bridged from another product containing a higher percentage of the active ingredients Beta-cyfluthrin (1.35%), an enriched isomer mixture of Cyfluthrin and Imidacloprid (10%). The non-acute information pertains to the active ingredients, Beta-cyfluthrin technical, Cyfluthrin

# Material Safety Data Sheet

MSDS Number: 000000002228

MSDS Version 1.0

## Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

technical, and Imidacloprid technical. Toxicology information on Cyfluthrin technical can be obtained by calling the Product Use Information Number on page 1.

**Acute Oral Toxicity** Male/Female Rat: LD50: > 2,000 mg/kg

**Acute Dermal Toxicity** Male/Female Rat: LD50: > 4,000 mg/kg

**Acute Inhalation Toxicity** Male/Female Rat: LC50: > 1.2 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
(actual)  
Maximum attainable concentration.

Male/Female Rat: LC50: > 4.8 mg/l  
Exposure time: 1 h  
Determined in the form of liquid aerosol.  
Extrapolated from the 4 hr LC50.  
(actual)

**Skin Irritation** Rabbit: non-irritant

**Eye Irritation** Rabbit: non-irritant

**Sensitization** Guinea pig: non-sensitizing

**Subchronic Toxicity** BETA-CYFLUTHRIN TECHNICAL  
In a subchronic dietary study, dogs treated with beta-cyfluthrin, exhibited vomiting, diarrhea, decreased body weight gain and clinical neurological symptoms at the highest dose level (360 ppm).

In a subchronic dietary study in rats treated with beta-cyfluthrin, effects included reduced body weight gains and feed consumption, uncoordinated gait, and skin injuries of the neck and head from excessive preening due to the local irritant effect of the test material.

In a 4-week inhalation study in rats exposed to beta-cyfluthrin, effects observed included ungroomed fur, piloerection, hyper- and hypoactivity, reduced body weight gains, hematological changes and reduced organ weights (thymus, spleen).

IMIDACLOPRID TECHNICAL  
In a 3-week dermal toxicity study, rabbits treated with imidacloprid showed no local or systemic effects at levels up to and including 1000 mg/kg, the limit dose.

In a 4-week inhalation study, rats exposed to high concentrations of imidacloprid exhibited decreased body weight gains and changes in clinical chemistries and organ weights.

**Chronic Toxicity** IMIDACLOPRID TECHNICAL  
In chronic dietary studies in rats and dogs exposed to imidacloprid, the target organs were the thyroids and/or liver.

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

# Material Safety Data Sheet

MSDS Number: 000000002228

MSDS Version 1.0

## Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

### ACGIH

None

### NTP

None

### IARC

None

### OSHA

None

### Reproductive & Developmental Toxicity

#### BETA-CYFLUTHRIN TECHNICAL

DEVELOPMENTAL TOXICITY: In an oral developmental toxicity study in rats treated with beta cyfluthrin, decreased fetal body weights and an increased incidence of skeletal findings were observed at the maternally toxic and lethal high dose level (40 mg/kg).

#### IMIDACLOPRID TECHNICAL

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.

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.

### Neurotoxicity

#### BETA-CYFLUTHRIN TECHNICAL

In acute and subchronic neurotoxicity screening studies in rats, beta-cyfluthrin produced slight transient neurobehavioral effects in each study at the highest dose tested. There were no correlating morphological changes in neural tissues in either study.

#### IMIDACLOPRID TECHNICAL

In acute and subchronic neurotoxicity screening studies in rats, imidacloprid produced slight neurobehavioral effects in each study at the highest dose tested. There were no correlating morphological changes observed in the neural tissues.

In a one-generation developmental neurotoxicity screening study in rats, offspring exposed to imidacloprid showed decreased body weights and motor activities. These effects occurred at the highest dose tested and in conjunction with maternal toxicity. There were no correlating morphological changes observed in the neural tissues.

### Mutagenicity

#### BETA-CYFLUTHRIN TECHNICAL

Numerous in vitro and in vivo mutagenicity studies have been conducted on beta-cyfluthrin, all of which are negative.

#### IMIDACLOPRID TECHNICAL

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

# Material Safety Data Sheet

## Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

MSDS Number: 000000002228  
MSDS Version 1.0

### SECTION 12. ECOLOGICAL INFORMATION

<b>Environmental Precautions</b>	Apply this product only as specified on the label. Do not apply directly to water. This product is extremely toxic to fish and aquatic invertebrates. Do not apply this product while bees are actively visiting the treated area. This product is highly toxic to bees exposed to direct treatment.
----------------------------------	--

### SECTION 13. DISPOSAL CONSIDERATIONS

<b>General Disposal Guidance</b>	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 any applicable state or local guidelines. Never place unused product down any indoor or outdoor drain.
<b>Container Disposal</b>	Do not re-use empty containers. Triple rinse containers. Wrap and discard in trash.
<b>RCRA Classification</b>	Not Regulated under this Statute

### SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:  
Not regulated for transportation

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

### SECTION 15. REGULATORY INFORMATION

<b>EPA Registration No.</b>	72155-28
-----------------------------	----------

#### US Federal Regulations

##### TSCA list

None

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

Beta-cyfluthrin Technical

68359-37-5

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

None

# Material Safety Data Sheet

MSDS Number: 000000002228  
MSDS Version 1.0

## Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use

### Canadian Regulations

Canadian Domestic Substance List  
None

### Environmental

#### CERCLA

None

#### Clean Water Section 307 Priority Pollutants

None

#### Safe Drinking Water Act Maximum Contaminant Levels

None

### International Regulations

#### EU Classification

None

#### European Inventory of Existing Commercial Substances (EINECS)

Beta-cyfluthrin Technical

68359-37-5

## SECTION 16. OTHER INFORMATION

NFPA 704: (National Fire Protection Association)

Health - 1

Flammability - 1

Reactivity - 1

Others - None

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Issue: New Material Safety Data Sheet

Approval Date: 11/19/2004

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer AG. Bayer Environmental Science