



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

1/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### Product identifier

**Trade name** PROKOZ ZENITH 2F INSECTICIDE

**Product code (UVP)** 06004481

**SDS Number** 102000015064

**EPA Registration No.** 432-1312

#### Relevant identified uses of the substance or mixture and uses advised against

**Use** Insecticide

**Restrictions on use** See product label for restrictions.

#### Information on manufacturer

Bayer Environmental Science  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States

**Emergency Telephone Number (24hr/ 7 days)** 1-800-334-7577 (24 hours/day)

**Product Information Telephone Number** 1-800-331-2867

**SDS Information or Request** SDSINFO.BCS-NA@bayer.com

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation : Category 2B

**Signal word:** Warning

#### Hazard statements

Causes eye irritation.

#### Precautionary statements

Wash thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

#### Other hazards

No other hazards known.



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

2/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No.     | Average % by Weight |
|--------------------------|-------------|---------------------|
| Imidacloprid             | 138261-41-3 | 21.40               |
| Glycerine                | 56-81-5     | 10.00               |

### SECTION 4: FIRST AID MEASURES

#### Description of first aid measures

|                       |                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b> | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.                                                                                                                                                            |
| <b>Inhalation</b>     | 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.                                                                                      |
| <b>Skin contact</b>   | 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.                                                                                                               |
| <b>Eye contact</b>    | 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.                                                                       |
| <b>Ingestion</b>      | 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. |

#### Most important symptoms and effects, both acute and delayed

|                 |                                |
|-----------------|--------------------------------|
| <b>Symptoms</b> | To date no symptoms are known. |
|-----------------|--------------------------------|

#### Indication of any immediate medical attention and special treatment needed

|                  |                                                                                                                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Treatment</b> | Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote. |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|

### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

|                 |                                                                    |
|-----------------|--------------------------------------------------------------------|
| <b>Suitable</b> | Water spray, Foam, Carbon dioxide (CO <sub>2</sub> ), Dry chemical |
|-----------------|--------------------------------------------------------------------|

|                   |             |
|-------------------|-------------|
| <b>Unsuitable</b> | None known. |
|-------------------|-------------|

#### Advice for firefighters

|                                                       |                                                                                                          |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Special protective equipment for fire-fighters</b> | Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. |
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## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

3/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

---

|                                 |                                                                                                                                                                                        |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Further information</b>      | Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. |
| <b>Flash point</b>              | > 93 °C                                                                                                                                                                                |
| <b>Autoignition temperature</b> | no data available                                                                                                                                                                      |
| <b>Lower explosion limit</b>    | no data available                                                                                                                                                                      |
| <b>Upper explosion limit</b>    | no data available                                                                                                                                                                      |
| <b>Explosivity</b>              | not applicable                                                                                                                                                                         |
| <b>Dust explosion class</b>     | Not applicable.                                                                                                                                                                        |

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

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

### Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**Conditions for safe storage, including any incompatibilities**



# PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

4/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

## Requirements for storage areas and containers

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

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

| Components                                              | CAS-No.     | Control parameters    | Update  | Basis    |
|---------------------------------------------------------|-------------|-----------------------|---------|----------|
| Imidacloprid                                            | 138261-41-3 | 0.7 mg/m3<br>(TWA)    |         | OES BCS* |
| Imidacloprid                                            | 138261-41-3 | 5ug/m3<br>(AN ESL)    | 07 2011 | TX ESL   |
| Imidacloprid                                            | 138261-41-3 | 50ug/m3<br>(ST ESL)   | 07 2011 | TX ESL   |
| Glycerine<br>(Total dust.)                              | 56-81-5     | 15 mg/m3<br>(PEL)     | 02 2006 | OSHA Z1  |
| Glycerine<br>(Respirable fraction.)                     | 56-81-5     | 5 mg/m3<br>(PEL)      | 02 2006 | OSHA Z1  |
| Glycerine<br>(Respirable fraction.)                     | 56-81-5     | 5 mg/m3<br>(TWA)      | 1989    | OSHA Z1A |
| Glycerine<br>(Total dust.)                              | 56-81-5     | 10 mg/m3<br>(TWA)     | 1989    | OSHA Z1A |
| Glycerine<br>(Total dust and mist.)                     | 56-81-5     | 10 mg/m3<br>(TWA)     | 06 2008 | TN OEL   |
| Glycerine<br>(Respirable fraction and<br>dust or fume.) | 56-81-5     | 5 mg/m3<br>(TWA)      | 06 2008 | TN OEL   |
| Glycerine<br>(Particulate.)                             | 56-81-5     | 50ug/m3<br>(ST ESL)   | 02 2013 | TX ESL   |
| Glycerine<br>(Particulate.)                             | 56-81-5     | 5ug/m3<br>(AN ESL)    | 02 2013 | TX ESL   |
| Glycerine<br>(Vapor.)                                   | 56-81-5     | 100ug/m3<br>(AN ESL)  | 02 2013 | TX ESL   |
| Glycerine<br>(Vapor.)                                   | 56-81-5     | 1000ug/m3<br>(ST ESL) | 02 2013 | TX ESL   |

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

### Exposure controls

#### Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

#### 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.



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

5/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

---

|                                    |                                                                                                                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hand protection</b>             | Chemical resistant nitrile rubber gloves                                                                                                                                                        |
| <b>Eye protection</b>              | Tightly fitting safety goggles                                                                                                                                                                  |
| <b>Skin and body protection</b>    | Wear long-sleeved shirt and long pants and shoes plus socks.                                                                                                                                    |
| <b>General protective measures</b> | Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.<br>Keep and wash PPE separately from other laundry. |

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                               |                                 |
|-----------------------------------------------|---------------------------------|
| <b>Appearance</b>                             | white to light beige            |
| <b>Physical State</b>                         | liquid suspension               |
| <b>Odor</b>                                   | mild                            |
| <b>Odour Threshold</b>                        | no data available               |
| <b>pH</b>                                     | 7.5                             |
| <b>Vapor Pressure</b>                         | no data available               |
| <b>Vapor Density (Air = 1)</b>                | no data available               |
| <b>Density</b>                                | 1.12 g/cm <sup>3</sup> at 20 °C |
| <b>Evaporation rate</b>                       | no data available               |
| <b>Boiling Point</b>                          | no data available               |
| <b>Melting / Freezing Point</b>               | -6.7 °C / 19.9 °F               |
| <b>Water solubility</b>                       | dispersible                     |
| <b>Minimum Ignition Energy</b>                | not applicable                  |
| <b>Decomposition temperature</b>              | no data available               |
| <b>Partition coefficient: n-octanol/water</b> | no data available               |
| <b>Viscosity</b>                              | 350 - 600 mPa.s                 |
| <b>Flash point</b>                            | > 93 °C                         |
| <b>Autoignition temperature</b>               | no data available               |
| <b>Lower explosion limit</b>                  | no data available               |
| <b>Upper explosion limit</b>                  | no data available               |
| <b>Explosivity</b>                            | not applicable                  |
| <b>Dust explosion class</b>                   | Not applicable.                 |

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## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

6/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

### SECTION 10: STABILITY AND REACTIVITY

#### Reactivity

|                                           |                                                                    |
|-------------------------------------------|--------------------------------------------------------------------|
| <b>Thermal decomposition</b>              | no data available                                                  |
| <b>Chemical stability</b>                 | Stable under recommended storage conditions.                       |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.        |
| <b>Conditions to avoid</b>                | freezing                                                           |
| <b>Incompatible materials</b>             | no data available                                                  |
| <b>Hazardous decomposition products</b>   | No decomposition products expected under normal conditions of use. |

### SECTION 11: TOXICOLOGICAL INFORMATION

|                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| <b>Exposure routes</b>   | Ingestion, Skin Absorption, Eye contact, Inhalation            |
| <b>Immediate Effects</b> |                                                                |
| <b>Eye</b>               | May cause mild irritation to eyes.                             |
| <b>Skin</b>              | May cause slight irritation. Harmful if absorbed through skin. |
| <b>Ingestion</b>         | Harmful if swallowed.                                          |

#### Information on toxicological effects

|                                  |                                                                                                                                                                                                                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Acute oral toxicity</b>       | LD50 (male rat) > 4,870 mg/kg<br>LD50 (female rat) 4,143 mg/kg                                                                                                                                                                                                                                 |
| <b>Acute inhalation toxicity</b> | LC50 (male/female combined rat) > 5.33 mg/l<br>Exposure time: 4 h<br>Determined in the form of liquid aerosol.<br>(actual)<br><br>LC50 (male/female combined rat) > 20 mg/l<br>Exposure time: 1 h<br>Determined in the form of liquid aerosol.<br>Extrapolated from the 4 hr LC50.<br>(actual) |
| <b>Acute dermal toxicity</b>     | LD50 (male/female combined rabbit) > 2,000 mg/kg                                                                                                                                                                                                                                               |
| <b>Skin irritation</b>           | No skin irritation (rabbit)                                                                                                                                                                                                                                                                    |
| <b>Eye irritation</b>            | Minimally irritating. (rabbit)                                                                                                                                                                                                                                                                 |
| <b>Sensitisation</b>             | Non-sensitizing. (guinea pig)                                                                                                                                                                                                                                                                  |

#### Assessment repeated dose toxicity

Imidacloprid did not cause specific target organ toxicity in experimental animal studies.

#### Assessment Mutagenicity



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

7/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

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

### Assessment Carcinogenicity

Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.

### ACGIH

None.

### NTP

None.

### IARC

None.

### OSHA

None.

### Assessment toxicity to reproduction

Imidacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity.

### Assessment developmental toxicity

Imidacloprid caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Imidacloprid are related to maternal toxicity.

### Further information

Only acute toxicity studies have been performed on the formulated product.  
The non-acute information pertains to the active ingredient(s).

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## SECTION 12: ECOLOGICAL INFORMATION

|                                          |                                                                                                                                                                |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Toxicity to fish</b>                  | LC50 (Rainbow trout ( <i>Oncorhynchus mykiss</i> )) 211 mg/l<br>Exposure time: 96 h<br>The value mentioned relates to the active ingredient imidacloprid.      |
|                                          | EC50 (Water flea ( <i>Daphnia magna</i> )) 85 mg/l<br>Exposure time: 48 h<br>The value mentioned relates to the active ingredient imidacloprid.                |
|                                          | LC50 ( <i>Chironomus riparius</i> (non-biting midge)) 0.0552 mg/l<br>Exposure time: 24 h<br>The value mentioned relates to the active ingredient imidacloprid. |
| <b>Toxicity to aquatic invertebrates</b> |                                                                                                                                                                |
| <b>Toxicity to aquatic plants</b>        | EC50 ( <i>Desmodesmus subspicatus</i> ) > 10 mg/l<br>Growth rate; Exposure time: 72 h<br>The value mentioned relates to the active ingredient imidacloprid.    |
| <b>Biodegradability</b>                  | Imidacloprid ; not rapidly biodegradable                                                                                                                       |



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

8/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Koc</b>                       | Imidacloprid: Koc: 225                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Bioaccumulation</b>           | Imidacloprid: ; Does not bioaccumulate.                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Mobility in soil</b>          | Imidacloprid: Moderately mobile in soils                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Environmental precautions</b> | Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.<br>Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.<br>Apply this product as specified on the label.<br>Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. |

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

|                               |                                                                                                                                                                                                                                                                         |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>                | Do not contaminate water, food, or feed by disposal.<br>Dispose in accordance with all local, state/provincial and federal regulations.                                                                                                                                 |
| <b>Contaminated packaging</b> | Do not re-use empty containers.<br>Triple rinse containers.<br>Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning.<br>If burned, stay out of smoke. |
| <b>RCRA Information</b>       | Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.                                                                 |

## SECTION 14: TRANSPORT INFORMATION

|                          |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|
| <b>49CFR</b>             | Not dangerous goods / not hazardous material                                      |
| <b>IMDG</b>              |                                                                                   |
| UN number                | <b>3082</b>                                                                       |
| Class                    | 9                                                                                 |
| Packaging group          | III                                                                               |
| Marine pollutant         | YES                                                                               |
| Proper shipping name     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.<br>(IMIDACLOPRID SOLUTION) |
| <b>IATA</b>              |                                                                                   |
| UN number                | <b>3082</b>                                                                       |
| Class                    | 9                                                                                 |
| Packaging group          | III                                                                               |
| Environm. Hazardous Mark | YES                                                                               |



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

9/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(IMIDACLOPRID SOLUTION )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

### SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1312

#### 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 MN

##### 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

##### EPA/FIFRA Information:

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



## PROKOZ ZENITH 2F INSECTICIDE

Version 3.0 / USA  
102000015064

10/10  
Revision Date: 03/07/2014  
Print Date: 03/26/2015

criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

**Signal word:** Caution!

**Hazard statements:** Hazard to humans and domestic animals.  
Keep out of reach of children and animals.  
Harmful if swallowed or absorbed through skin.  
Avoid contact with skin, eyes and clothing.  
Avoid breathing spray mist.

### SECTION 16: OTHER INFORMATION

**NFPA 704 (National Fire Protection Association):**

Health - 1      Flammability - 1      Instability - 1      Others - none

**HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)**

Health - 1      Flammability - 1      Physical Hazard - 1      PPE -

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

**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

**Revision Date:** 03/07/2014

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