

## SECTION 1: Product and Company Identification

### 1.1. Product identifier

Trade name : XYTECT 2F  
Chemical name : Imidacloprid  
Product code : EPA Reg. No. 42750-115-74779

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

#### 1.2.1. Relevant identified uses

Use of the substance/preparation : Insecticide. Read and understand the entire label before using. Use only according to label directions. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

#### 1.2.2. Uses advised against

No data available

### 1.3. Details of the supplier of the safety data sheet

Rainbow Ecoscience  
11571 K-Tel Drive  
Minnetonka, MN 55343  
Phone: 1-(877) 272-6747 (toll free)  
[www.Rainbowecoscience.com](http://www.Rainbowecoscience.com)

### 1.4. Emergency telephone number

Emergency number : 1-800-424-9300 (CHEMTREC)

## SECTION 2: Hazards identification

### Classification of the substance or mixture

Skin sensitization, Category 1 H317 May cause an allergic skin reaction.  
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400 Very toxic to aquatic life.  
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410 Very toxic to aquatic life with long lasting effects.

Full text of H statements : see section 16

### GHS Labeling Elements

Hazard pictograms (CLP) :



Signal word : WARNING

Hazard statements : H317 - May cause an allergic skin reaction.  
P261 - Avoid breathing mist, vapors, spray.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective gloves.  
P302+P352 - If on skin: Wash with plenty of water.  
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.

### SECTION 3: Composition/information on ingredients

Name	Product identifier	%/wt.
Imidacloprid	(CAS No.) 138261-41-3	20.76 - 22.49
Propylene glycol	(CAS No.) 57-55-6	3 - 7
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	(CAS No.) 2634-33-5	0.1 - 1.0

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First Aid responders should use protective equipment in Section 8 if there is a potential for exposure to product.

- IF SWALLOWED** : Immediately call a poison center or doctor/physician. If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel.
- IF IN EYES** : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist call a doctor.
- IF ON SKIN OR CLOTHING** : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison center or a doctor if you feel unwell.
- IF INHALED** : Move the affected person to fresh air. If not breathing, give artificial respiration. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures – general

Have a product container or label with you when calling a poison control center or doctor, or going in for treatment.

NOTE TO PHYSICIAN: There is no specific antidote, treat symptomatically.

#### 4.2 Most important symptoms/effects, acute and delayed

- Inhalation** : May cause minor irritation to the respiratory tract and to other mucous membranes.
- Skin** : May cause slight irritation to the skin. May cause an allergic skin reaction.
- Eyes** : May cause slight irritation.
- Ingestion** : Harmful if swallowed.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : None.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : This product is not flammable.
- Hazardous decomposition products in case of fire : None known

### 5.3. Advice for firefighters

Firefighting instructions : Do not attempt to take action without suitable protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin, eyes and clothing. Do not breathe dust. Do not touch or walk on the spilled product.  
 Emergency procedures : Keep unnecessary and unprotected personnel away from spillage.  
 Protective equipment : Use personal protective equipment as required. For further information refer to "Exposure controls/personal protection".

### 6.2. Environmental precautions

This material should be prevented from contaminating soil or entering sewage and drainage systems and bodies of water. Minimize use of water for cleaning spills to prevent environmental contamination.

### 6.3. Methods and material for containment and cleaning up

For containment : Dike and contain spill.  
 Methods for cleaning up : Absorb with an inert material and place in an appropriate waste disposal container

For further information refer to section 8: "Exposure controls/personal protection"

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

KEEP OUT OF REACH OF CHILDREN!

Precautions for safe handling : Always wash hands after handling the product. Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse. Refer to product label for additional information on use and handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store in dry, cool, well-ventilated area. Do not contaminate water, food, or feed by storage or disposal. Keep in original containers.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Imidacloprid (138261-41-3)</b>	
USA - ACGIH - Occupational Exposure Limits	
Local name	Imidacloprid
ACGIH® TLV® TWA	0.005 mg/m <sup>3</sup> (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Male repro system dam; Body weight; Repro eff; Neurodevelopmental impair. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
<b>Propylene glycol (57-55-6)</b>	
USA - AIHA - Occupational Exposure Limits	
WEEL TWA	10 mg/m <sup>3</sup>

## 8.2. Appropriate engineering controls

Engineering controls : Ensure adequate ventilation.

## 8.3 Individual protection measures, such as personal protective equipment

<b>Materials for protective clothing:</b>
Wear suitable protective clothing
<b>Hand protection:</b>
Chemically resistant gloves, made of barrier laminate, butyl rubber ≥14mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or viton ≥14 mils
<b>Eye protection:</b>
Use suitable eye protection
<b>Skin and body protection:</b>
To avoid contact with skin, wear long pants, long-sleeved shirt and shoes plus socks.
<b>Respiratory protection:</b>
In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Off-white
Odor	: Weak paint, solvent character
pH (1%)	: 6.0 – 8.0
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: Not applicable
Boiling point	: No data available
Flash point	: >100 °C (>212 °F)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non-flammable
Vapor pressure	: No data available
Density	: 1.06 – 1.09 g/mL (8.85 – 9.10 lb/gl)*
Solubility	: No data available
Partition Coefficient	: No data available
Viscosity	: 104 mPa/s at 20 °C; 134 mPa/s at 40 °C
Explosive properties	: Not explosive
Oxidizing properties	: No oxidizing properties
Explosive limits	: Not applicable

\*Listed density is an approximate value and does not necessarily represent that of a specific batch

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Non-reactive

### 10.2. Chemical stability

Stable under normal conditions, however may decompose if heated.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Protect from heat and avoid exposure to temperatures above 100 °F (38 °C) for prolonged periods of time. A strong exothermic reaction can occur above 390 °F (200 °C).

### 10.5. Incompatible materials

None known

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity data for XYTECT 2F are provided below:

<b>XYTECT 2F</b>	
LD50 oral rat	>2500 mg/kg
LD50 dermal rat	>5000 mg/kg
LC50 inhalation rat	>2.27 mg/L
<b>Imidacloprid (138261-41-3)</b>	
LD50 oral rat	410 mg/kg
LD50 oral	379 mg/kg
LD50 dermal rat	> 5000 mg/kg
LD50 dermal	5000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 0.069 mg/l/4h No mortality at the highest concentration achievable.
<b>Propylene glycol (57-55-6)</b>	
LD50 oral rat	22000 mg/kg
LD50 dermal rat	20800 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
<b>1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)</b>	
LD50 oral rat	490 mg/kg
LD50 dermal rat	> 2000 mg/kg

	Not classified pH: 6 – 8
Serious eye damage/irritation	Not classified pH: 6 – 8
Respiratory or skin sensitization	May cause an allergic skin reaction
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified

<b>Imidacloprid (138261-41-3)</b>	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.0305 mg/l air Animal: rat, Guideline: OECD Guideline 412 (28-Day (Subacute) Inhalation Toxicity Study, Guideline: OECD Guideline 412 (28-Day (Subacute) Inhalation Toxicity Study, Guideline: EU Method B.8 (Subacute Inhalation Toxicity: 28-Day Study)
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study), Guideline: EPA OPP 82-2 (Repeated Dose Dermal Toxicity -21/28 Days)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.0055 mg/l air Animal: rat, Guideline: OECD Guideline 412 (28-Day (Subacute) Inhalation Toxicity Study, Guideline: OECD Guideline 412 (28-Day (Subacute) Inhalation Toxicity Study, Guideline: EU Method B.8 (Subacute Inhalation Toxicity: 28-Day Study)
<b>Propylene glycol (57-55-6)</b>	
NOAEL (subchronic, oral, animal/male, 90 days)	443 mg/kg body weight Animal: cat, Animal sex: male
Aspiration hazard	Not classified
<b>Xytect 2F</b>	
Viscosity, kinematic	104 mm <sup>2</sup> /s
Inhalation	May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin	May cause slight irritation to the skin. May cause an allergic skin reaction.
Eyes	May cause slight irritation.
Ingestion	Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Ecotoxicity

Ecology - general	toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment.
Hazardous to the aquatic environment, short-term (acute)	Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic)	Very toxic to aquatic life with long lasting effects.
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<b>Imidacloprid (138261-41-3)</b>	
LC50 - Fish [1]	161 mg/l
EC50 - Crustacea [1]	2.7 µg/l
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC (chronic)	1.8 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	9.02 mg/l
NOEC chronic crustacea	56 ng/l
NOEC chronic algae	100 mg/l

<b>Propylene glycol (57-55-6)</b>	
LC50 - Fish [1]	51400 mg/l Pimephales promelas (Fathead minnow)
EC50 - Crustacea [1]	43500 mg/l
EC50 72h - Algae [1]	51600 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 72h - Algae [1]	19300 mg/l Skeletonema costatum (marine diatom)
EC50 72h - Algae [2]	24200 mg/l Pseudokirchneriella subcapitata
EC50 96h - Algae [1]	19100 mg/l Skeletonema costatum (marine diatom)
EC50 96h - Algae [2]	19000 mg/l Pseudokirchneriella subcapitata

<b>1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)</b>	
LC50 - Fish [1]	51400 mg/l Pimephales promelas (Fathead minnow)
EC50 - Crustacea [1]	43500 mg/l

## 12.2. Persistence and degradability

<b>XyTECT 2F</b>	
Persistence and degradability	No additional information available.
<b>Imidacloprid (138261-41-3)</b>	
Persistence and degradability	No additional information available.
<b>Propylene glycol (57-55-6)</b>	
Persistence and degradability	Readily biodegradable.
<b>1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)</b>	
Persistence and degradability	Not rapidly degradable.

## 12.3. Bioaccumulative potential

<b>Imidacloprid (138261-41-3)</b>	
Partition coefficient n-octanol/water (Log Pow)	0.57 Source: NLM
Partition coefficient n-octanol/water (Log Kow)	≤ 3

<b>Propylene glycol (57-55-6)</b>	
Partition coefficient n-octanol/water (Log Pow)	-0.92
Bioaccumulative potential	Low bioaccumulation potential.
<b>1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)</b>	
BCF - Fish [1]	6.62
Partition coefficient n-octanol/water (Log Kow)	0.7

#### 12.4 Mobility in soil

No additional information available

#### 12.5 Other adverse effects

Ozone	Not classified
Fluorinated greenhouse gases	No

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Do not contaminate water, food, or feed by storage or disposal.

**Waste:** Pesticide wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations.

**Container Disposal:** Non-refillable containers: Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Refillable container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Refer to the container label to determine if it is refillable and for complete cleaning and disposal instructions.

### SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

**DOT:** Not regulated when shipped domestically by highway in non-buk containers as per 49 CFR 171.4

**UN/ID no.:** UN3082

**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s (Imidacloprid)

**Hazard class:** 9 Packing group: PG III

**IMDG - Marine Pollutant IMDG - Marine Pollutant.**

**TDG:** When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1

**UN/ID no.:** UN3082

**Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid)

**Hazard class:** 9

**Packing group:** PG III

**Marine Pollutant:** Y or N [List Ingredient(s) with %]: Marine pollutant.

**ICAO**

**UN/ID no.** UN3082

**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s (Imidacloprid)

**Hazard class** 9

**Packing group** PG III

**Description** IMDG - Marine Pollutant

**IATA**

**UN/ID no.** UN3082

**Proper shipping name** Environmentally hazardous substances, liquid, n.o.s (Imidacloprid)

**Hazard class** 9

**Packing group** PG III

**Description** IMDG - Marine Pollutant

**IMDG**

**UN/ID no.** UN3082

**Proper shipping name** Environmentally hazardous substances, liquid, n.o.s (Imidacloprid)

**Hazard class** 9

**Packing group** PG III

**Environmental hazards** IMDG - Marine Pollutant

**SECTION 15: Regulatory information**

**FIFRA Labelling**

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

FIFRA Signal Word	Caution
FIFRA Precautionary Statement	Keep out of reach of children. Hazards to Humans and Domestic Animals.
FIFRA Human Health Hazards	Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation.
FIFRA First Aid	Avoid contact with skin, eyes, or clothing.
FIFRA Environmental Hazards	This product is highly toxic to aquatic invertebrates. Do not apply to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds. Do not apply this product or allow it to drift to blooming crops/plants or weeds if bees are foraging the treatment area. This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**15.2. International regulations**

**CANADA**

<b>Propylene glycol (57-55-6)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)</b>
Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**

No additional information available

**National regulations**

<b>1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)</b>
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**15.3. State regulations**

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Propylene glycol(57-55-6)	U.S. - New Jersey - Right to Know Hazardous Substance List

**SECTION 16: Other information**

According to 29CFR 1910.1200 OSHA Hazard Communication Standard (HCS 2024) and the Hazardous Products Regulation (WHMIS 2015 rev 2022)

**REVISED:** October 31, 2025

Full text of hazard classes and H-statements	
H317	May cause an allergic skin reaction
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

*Disclaimer: The information provided by Rainbow Treecare Scientific Advancements. contained herein is given in good faith and correct to the best of our knowledge. However, the information given is designed only as guidance for safe handling, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.*