

RAXIL® PRO SHIELD INSECTICIDE AND FUNGICIDE

Version 4.0 / USA Revision Date: 03/10/2025 102000029937 Print Date: 03/12/2025

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

Product identifier

Trade name RAXIL® PRO SHIELD INSECTICIDE AND FUNGICIDE

Product code (UVP) 84481181

SDS Number 102000029937

EPA Registration No. 264-1186

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

Use Seed treatment

Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer CropScience LP

800 North Lindbergh Blvd.

St. Louis, MO 63167

USA

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)

1-800-334-7577

Product Information Telephone Number

1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Acute toxicity(Inhalation): Category 4 Skin sensitisation: Category 1 Reproductive toxicity: Category 2

Labelling in accordance with regulation HCS 29CFR §1910.1200





Signal word: Warning



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Hazard statements

Harmful if inhaled.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

Precautionary statements

Avoid breathing mist/ vapours/ spray.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN: Wash with plenty of water/ soap.

If skin irritation or rash occurs: Get medical advice/ attention.

Specific treatment (see supplemental first aid instructions on this label).

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/ attention.

Store locked up.

Protect from sunlight.

Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.

No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight	
Imidacloprid	138261-41-3	8.59	
Prothioconazole	178928-70-6	1.47	
Metalaxyl	57837-19-1	0.57	
Imidacloprid Prothioconazole Metalaxyl Tebuconazole	107534-96-3	0.29	
Amines, tallow alkyl, ethoxylated, 15 EO	61791-26-2	3 – 7	

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when

calling a poison control center or doctor or going for treatment.

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.



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Skin contact 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.

Eye contact 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.

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.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Treatment Appropriate supportive and symptomatic treatment as indicated by the

patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon

dioxide.

Unsuitable High volume water jet

Special hazards arising from the substance or

mixture

Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective

equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and

full protective clothing.

Further information 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.

Specific hazards from the substance or mixture which can increase the fire

Flash point >104 °C / 219.2 °F

No flash point - Determination conducted up to the boiling point.

Auto-ignition temperature 430 °C / 806 °F

Lower explosion limit No data available



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Upper explosion limit No data available

Explosivity Not explosive

92/69/EEC, A.14 / OECD 113

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. If the product is accidentally

spilled, 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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handlingUse only in area provided with appropriate exhaust ventilation. Handle

and open container in a manner as to prevent spillage.

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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean

clothing.

Conditions for safe storage, including any incompatibilities

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. Keep away from direct sunlight.

Advice on common storage Keep away from food, drink and animal feedingstuffs.



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Imidacloprid	138261-41-3	0.7 mg/m3 (TWA)		OES BCS*
Prothioconazole	178928-70-6	1.4 mg/m3 (SK-ABS)		OES BCS*
Tebuconazole	107534-96-3	0.2 mg/m3 (SK-ABS)		OES BCS*

^{*}OES BCS: Internal Bayer AG, Crop Science Division "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.

Hand protection Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile

rubber or Viton)

Eye protection Tightly fitting safety goggles

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form suspension

ColourredOdourmild

Odour Threshold No data available

pH 7.2 - 8.8 (100 %) (23 °C)

Melting point/ rangeNo data availableBoiling PointNo data availableFlash point> 104 °C / 219.2 °F



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No flash point - Determination conducted up to the boiling point.

Flammability No data available **Auto-ignition temperature** 430 °C / 806 °F Thermal decomposition No data available

No data available Minimum ignition energy **Self-accelarating** No data available

decomposition temperature

(SADT)

Upper explosion limit No data available Lower explosion limit No data available

Vapour pressure No significant volatility.

Evaporation rate No data available Relative vapour density No data available Relative density No data available 1.08 g/cm3 (20 °C) **Density**

Water solubility No data available

Partition coefficient: n-

octanol/water

Imidacloprid: log Pow: 0.57

Prothioconazole: log Pow: 3.82 (20 °C) (pH 7)

Tebuconazole: log Pow: 3.7

Viscosity, dynamic 15 - 50 mPa.s (20 °C)

Velocity gradient 20 /s 10 - 40 mPa.s (20 °C) Velocity gradient 100 /s

Viscosity, kinematic No data available Impact sensitivity Not impact sensitive. Oxidizing properties No oxidizing properties

Explosivity Not explosive

92/69/EEC, A.14 / OECD 113

Other information Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY



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Reactivity Stable under normal conditions.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous

reactions

No hazardous reactions when stored and handled according to

prescribed instructions.

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials No incompatible materials known.

Hazardous decomposition

products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Inhalation, Ingestion, Eye contact, Skin contact

Immediate Effects

Eye May cause temporary eye irritation.

Skin May be harmful in contact with skin. May cause sensitisation by skin

contact.

Ingestion May be harmful if swallowed.

Inhalation Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity LD50 (Rat) > 2,000 mg/kg

Test conducted with a similar formulation.

Acute inhalation toxicity LC50 (Rat) > 2.08 mg/l

Exposure time: 4 h

highest concentration tested

Test conducted with a similar formulation.

Acute dermal toxicity LD50 (Rat) > 2,000 mg/kg

Test conducted with a similar formulation.

Skin corrosion/irritation No skin irritation (Rabbit)

Test conducted with a similar formulation.

Serious eye damage/eye

irritation

Moderate eye irritation. (Rabbit)

Test conducted with a similar formulation.

Respiratory or skin Skin: Sensitising (Guinea pig)

sensitisation OECD Test Guideline 429, loc

OECD Test Guideline 429, local lymph node assay (LLNA)

Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity - single exposure

Imidacloprid: Based on available data, the classification criteria are not met. Prothioconazole: Based on available data, the classification criteria are not met. Metalaxyl: Based on available data, the classification criteria are not met.



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Tebuconazole: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity - repeated exposure

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

Assessment mutagenicity

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

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

Metalaxyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

ACGIH

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

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

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

Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.

None. NTP None. IARC 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. Prothioconazole 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 Prothioconazole is related to parental toxicity.

Metalaxyl did not cause reproductive toxicity in a multi-generation study in rats.

Tebuconazole 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 Tebuconazole 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.

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

Metalaxyl did not cause developmental toxicity in rats and rabbits.

Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific



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malformations.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Acute toxicity studies have not been performed on this product as formulated.

The non-acute information pertains to the active ingredient(s).

No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 211 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient imidacloprid.

LC50 (Oncorhynchus mykiss (rainbow trout)) 1.83 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient prothioconazole.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 85 mg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient imidacloprid.

EC10 (Chironomus riparius (non-biting midge)) 0.00209 mg/l

Exposure time: 28 Days

The value mentioned relates to the active ingredient imidacloprid.

EC50 (Daphnia magna (Water flea)) 1.3 mg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient prothioconazole.

Toxicity to aquatic plants EC50 (Desmodesmus subspicatus (green algae)) > 10 mg/l

Exposure time: 72 h

The value mentioned relates to the active ingredient imidacloprid. IC50 (Raphidocelis subcapitata (freshwater green alga)) 2.18 mg/l

Exposure time: 72 h

The value mentioned relates to the active ingredient prothioconazole.

Biodegradability Imidacloprid:

Not rapidly biodegradable

Prothioconazole:

Not rapidly biodegradable

Metalaxyl:

Not rapidly biodegradable

Tebuconazole:

Not rapidly biodegradable

Koc Imidacloprid: Koc: 225

Prothioconazole: Koc: 1765



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Metalaxyl: Koc: 163

Tebuconazole: Koc: 769

Bioaccumulation Imidacloprid:

Does not bioaccumulate.

Prothioconazole: Bioconcentration factor (BCF) 19

Does not bioaccumulate.

Metalaxyl: Bioconcentration factor (BCF) < 7

Does not bioaccumulate.

Tebuconazole: Bioconcentration factor (BCF) 35 - 59

Does not bioaccumulate.

Mobility in soil Imidacloprid: Moderately mobile in soils

Prothioconazole: Slightly mobile in soils Metalaxyl: Moderately mobile in soils Tebuconazole: Slightly mobile in soils

Results of PBT and vPvB assessment

PBT and vPvB assessment Imidacloprid: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Prothioconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Metalaxyl: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Tebuconazole: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Additional ecological

information

No other effects to be mentioned.

Environmental precautions Apply this product as specified on the label.

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.

Do not allow to get into surface water, drains and ground water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Dispose in accordance with all local, state/provincial and federal

regulations.

Contaminated packaging Consult state and local regulations regarding the proper disposal of

container.

Follow advice on product label and/or leaflet.



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RCRA Information 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

49CFR Not dangerous goods / not hazardous material

IMDG

UN number 3082
Class 9
Packaging group III
Marine pollutant YES

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(IMIDACLOPRID SOLUTION)

IATA

UN number 3082
Class 9
Packaging group III
Environm. Hazardous Mark YES

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.

Freight Classification: INSECTICIDES OR FUNGICIDES O/T POISON

INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN

POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-1186



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US Federal Regulations

TSCA list

Water 7732-18-5 1,2-Propanediol 57-55-6 Amines, tallow alkyl, ethoxylated, 15 EO 61791-26-2 Polyethylene-polypropylene copolymer 9003-11-6 Calcium 4-[(5-chloro-4-methyl-2-7023-61-2

sulphonatophenyl)azo]-3-hydroxy-2-

naphthoate

Glycerine 56-81-5

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No export notification needs to be made.

SARA Title III - Section 302 - Notification and Information

Not applicable.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting CA Prop65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol 57-55-6 MN. RI Glycerine MN, RI 56-81-5

Environmental

CERCLA

None.

Clean Water Section 307(a)(1)

Safe Drinking Water Act Maximum Contaminant Levels

Yes

Tebuconazole 107534-96-3

EPA/FIFRA Information:

This chemical is a pesticide product regulated 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 required on the pesticide label:



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Signal word: Caution!

Hazard statements: Harmful if swallowed, inhaled or absorbed through the skin.

Causes moderate eye irritation.

Prolonged or frequently repeated skin contact may cause allergic

reactions in some individuals.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49 ACGIH US. ACGIH Threshold Limit Values

ATE Acute toxicity estimate

CAS-Nr. Chemical Abstracts Service number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

EINECS European inventory of existing commercial substances

ELINCS European list of notified chemical substances IARC International Agency for Research on Cancer IATA International Air Transport Association IMDG International Maritime Dangerous Goods

N.O.S. Not otherwise specified

NTP US. National Toxicology Program (NTP) Report on Carcinogens
OECD Organization for Economic Co-operation and Development

TDG Transportation of Dangerous Goods

TWA Time weighted average

UN United Nations

WHO World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 0 Instability - 0 Others - none

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

Health - 2* Flammability - 0 Physical Hazard - 0 PPE -

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

* = chronic health hazard

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 11: Toxicological Information. Section 16: Other Information. Reviewed and updated for general editorial purposes.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are



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