

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

1/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

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

1.1 Product identifier

Trade name IMPULSE

Product code (UVP) 06280714

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

Use Fungicide

EPA-Nr. HSR007652

Restrictions on use See product label for restrictions.

1.3 Details of the supplier of the safety data sheet

Supplier Bayer New Zealand Limited
CropScience Division
B:HIVE Building
74 Taharoto Rd
Smales Farm
Takapuna
Auckland, 0622
New Zealand

Telephone 0800 428 246

Telefax (09) 441 8645

1.4 Emergency telephone no.

Emergency Number 0800 734 607 (24hr)

Global Incident Response Hotline (24h) +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2020 as amended

Acute Tox. 4

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H312 Harmful in contact with skin.

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

2/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

- Skin Irrit. 2
H315 Causes skin irritation.
- Eye Dam. 1
H318 Causes serious eye damage.
- Skin Sens. 1
H317 May cause an allergic skin reaction.
- STOT RE 1
H372 Causes damage to organs through prolonged or repeated exposure.
- Aquatic Chronic 1
H410 Very toxic to aquatic life with long lasting effects.
- Haz. terrestrial vert. 3
H433 Harmful to terrestrial vertebrates.

2.2 Label elements

Labelling in accordance with the Hazardous Substances (Safety Data Sheets) Notice 2020 as amended

Hazard label for supply/use required.



Signal word: Danger

Hazard statements

- H302 + H312 Harmful if swallowed, in contact with skin or if inhaled.
+ H332
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.
- H433 Harmful to terrestrial vertebrates.

Precautionary statements

- P103 Read label before use.
- P102 Keep out of reach of children.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P264 Wash face, hands and any exposed skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P391 Collect spillage.
- P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

3/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

No additional hazards known beside those mentioned.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Emulsifiable concentrate (EC)
Spiroxamine 500 g/l

Hazardous components

Chemical name	CAS-No.	Conc. [%]
Spiroxamine	118134-30-8	49.80
Benzyl alcohol	100-51-6	> 25
POLY(ARYLALKYL)PHENOL- POLYETHYLENGLYKOLET	70559-25-0	< 20
Benzenesulfonic acid, 4-C10-13-sec- alkylderivs., compds. with ethanolamine	1962138-75-5	< 25.00

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	No symptoms known or expected.
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4.3 Indication of any immediate medical attention and special treatment needed

Treatment	Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.
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SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

4/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

Contact the National Poisons and Hazardous Chemicals Information center in Dunedin, PO Box 913, Dunedin. Phone 0800 POISON (0800 764 766).

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Water spray, Carbon dioxide (CO₂), Foam, Sand

Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released:., Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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

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

6.3 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. Keep in suitable, closed containers for disposal.

6.4 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

7.1 Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

5/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

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

Suitable materials HDPE (high density polyethylene)

7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Spiroxamine	118134-30-8	0.6 mg/m ³ (SK-SEN)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 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 If product is handled while not enclosed, and if contact may occur: Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Material Nitrile rubber
Rate of permeability > 480 min
Glove thickness > 0.4 mm
Protective index Class 6
Directive Protective gloves complying with EN 374.

Eye protection Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

6/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

Skin and body protection	Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.
General protective measures	If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Liquid, clear to slightly turbid
Colour	yellow to brown
Odour	aromatic
Odour Threshold	No data available
pH	9.4 (ca. 1 %) (23 °C) (deionized water)
Melting point/ range	No data available
Boiling Point	No data available
Flash point	108 °C
Flammability	No data available
Auto-ignition temperature	265 °C
Thermal decomposition	No data available
Ignition temperature	The product is not self-ignitable.
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	ca. 1.00 g/cm ³ (20 °C)
Water solubility	emulsifiable

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

7/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

Partition coefficient: n-octanol/water	Spiroxamine: log Pow: 2.8 - 3.0 (20 °C) (pH 7)
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
10.4 Conditions to avoid	Extremes of temperature and direct sunlight.
10.5 Incompatible materials	Store only in the original container.
10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 500 - < 1,000 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (Rat) 2.323 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation.
Skin corrosion/irritation	Irritating to skin. (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	Risk of serious damage to eyes. (Rabbit) Test conducted with a similar formulation.

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

8/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

Respiratory or skin sensitisation

Skin: Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test
Skin: Sensitising (Mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – single exposure

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

Assessment STOT Specific target organ toxicity – repeated exposure

Spiroxamine caused specific target organ toxicity in experimental animal studies in dogs in the following organ(s): Eyes.

Assessment mutagenicity

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

Assessment carcinogenicity

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

Assessment toxicity to reproduction

Spiroxamine 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 Spiroxamine is related to parental toxicity.

Assessment developmental toxicity

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

Aspiration hazard

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

11.2 Information on other hazards

Endocrine disrupting properties

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 11.5 mg/l
Exposure time: 96 h
Test conducted with a similar formulation.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 10.3 mg/l
Exposure time: 48 h
Test conducted with a similar formulation.

Toxicity to aquatic plants

EC50 (Desmodesmus subspicatus (green algae)) 0.029 mg/l
Growth rate; Exposure time: 72 h

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

9/11

Revision Date: 05.07.2026
Print Date: 05.07.2026

Test conducted with a similar formulation.

12.2 Persistence and degradability

Biodegradability Spiroxamine:
Not rapidly biodegradable

Koc Spiroxamine: Koc: 2415

12.3 Bioaccumulative potential

Bioaccumulation Spiroxamine: Bioconcentration factor (BCF) 87
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Spiroxamine: criterion of mobility not fulfilled

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Spiroxamine: 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).

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

Contaminated packaging Triple rinse containers. Recycle if possible. If allowed under local authority, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. Do not use container for any other purpose.

SECTION 14: TRANSPORT INFORMATION

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.

ADR/RID/ADN

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROXAMINE, BENZYLALCOHOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazchem Code	3Z

IMDG

14.1 UN number	3082
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SAFETY DATA SHEET



IMPULSE

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14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROXAMINE, BENZYLALCOHOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROXAMINE, BENZYLALCOHOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to IMO instruments

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Further information

HSNO approval-Nr.	HSR007652
HSNO Controls	See www.epa.govt.nz
ACVM Reg.	P7419
ACVM Condition	See www.foodsafety.govt.nz

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)

SAFETY DATA SHEET



IMPULSE

Version 3 / NZ
102000007367

11/11

Revision Date: 05.07.2026
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ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.

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