Apparent Onslaught Insecticide

AIRR Apparent Pty Ltd.

Chemwatch Hazard Alert Code: **2**

Chemwatch: **9656-40**
Version No: **2.1**
Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Initial Date: **30/10/2026**
Revision Date: **30/10/2026**
Print Date: **23/11/2026**
L.GHS.AUS.EN.E

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	Apparent Onslaught Insecticide
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	PESTICIDE, SOLID, TOXIC, N.O.S. (contains fipronil)
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	A liquid broad spectrum insecticide. Use according to manufacturer's directions.

Details of the manufacturer or importer of the safety data sheet

Registered company name	**AIRR Apparent Pty Ltd.**
Address	15/16 Princes Street, Newport NSW 2106 Australia
Telephone	+61 3 5820 8400
Fax	Not Available
Website	www.apparent.com.au
Email	enquiries@apparentag.com.au

Emergency telephone number

Association / Organisation	**AIRR Apparent Pty Ltd.**
Emergency telephone number(s)	1800 033 111 (24 Hours)
Other emergency telephone number(s)	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	S6
Classification [1]	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, Specific Target Organ Toxicity - Repeated Exposure Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI***

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

Page 1 continued...

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and protective clothing.
P273	Avoid release to the environment.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311	Call a POISON CENTER/doctor/physician/first aider.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary statement(s) Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

No further product hazard information.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
120068-37-3	20	fipronil
Not Available	balance	Ingredients determined not to be hazardous
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available***	

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Immediately hold eyelids apart and flush the eye continuously with running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▸ Transport to hospital or doctor without delay. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▸ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▸ Quickly remove all contaminated clothing, including footwear. ▸ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▸ Transport to hospital, or doctor.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor, without delay.
Ingestion	▸ **IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.** ▸ For advice, contact a Poisons Information Centre or a doctor. ▸ Urgent hospital treatment is likely to be needed.

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	▸ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▸ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ▸ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. **Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:** ▸ **INDUCE** vomiting with fingers down the back of the throat, **ONLY IF CONSCIOUS**. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. **NOTE:** Wear a protective glove when inducing vomiting by mechanical means.

Indication of any immediate medical attention and special treatment needed

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).
For poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

SECTION 5 Firefighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

Special hazards arising from the substance or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Use fire fighting procedures suitable for surrounding area. ▸ **Do not** approach containers suspected to be hot. ▸ Cool fire exposed containers with water spray from a protected location. ▸ If safe to do so, remove containers from path of fire. ▸ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. ▸ On combustion, may emit toxic fumes of carbon monoxide (CO). ▸ May emit acrid smoke. ▸ Mists containing combustible materials may be explosive. Combustion products include: ▸ carbon dioxide (CO_2) hydrogen chloride phosgene hydrogen fluoride nitrogen oxides (NO_x) sulfur oxides (SO_x) ▸ other pyrolysis products typical of burning organic material. May emit poisonous fumes.
HAZCHEM	2X

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Continued...

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	▸ Remove all ignition sources. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment. ▸ Contain and absorb spill with sand, earth, inert material or vermiculite. ▸ Wipe up. ▸ Place in a suitable, labelled container for waste disposal.
Major Spills	▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Stop leak if safe to do so. ▸ Contain spill with sand, earth or vermiculite. ▸ Collect recoverable product into labelled containers for recycling. ▸ Neutralise/decontaminate residue (see Section 13 for specific agent). ▸ Collect solid residues and seal in labelled drums for disposal. ▸ Wash area and prevent runoff into drains. ▸ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ▸ If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid skin contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps. ▸ **DO NOT** enter confined spaces until atmosphere has been checked. ▸ **DO NOT** allow material to come in direct contact with human skin or eyes. ▸ **DO NOT** allow material to come in contact with exposed food or food contact surfaces. ▸ Suitable PPE must be worn at all times. ▸ Avoid contact with incompatible materials. ▸ When handling, **DO NOT** eat, drink or smoke. ▸ Keep containers securely sealed when not in use. ▸ Avoid physical damage to containers. ▸ Always wash hands with soap and water after handling. ▸ Work clothes should be laundered separately. Launder contaminated clothing before re-use. ▸ Use good occupational work practice. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS. ▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ Store in a cool, dry, well-ventilated area. ▸ Store away from incompatible materials and foodstuff containers. ▸ Protect containers against physical damage and check regularly for leaks. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Glass container is suitable for laboratory quantities ▸ Lined metal can, lined metal pail/ can. ▸ Plastic pail. ▸ Polyliner drum. ▸ Packing as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks. For low viscosity materials ▸ Drums and jerricans must be of the non-removable head type. ▸ Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.): ▸ Removable head packaging; ▸ Cans with friction closures and ▸ low pressure tubes and cartridges may be used. - Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages *. - In addition, where inner packagings are glass and contain liquids of packing group I and II there must be sufficient inert absorbent to absorb any spillage *. - * unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.
Storage incompatibility	▸ Avoid reaction with oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Continued...

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

MATERIAL DATA

Airborne particulate or vapour must be kept to levels as low as is practicably achievable given access to modern engineering controls and monitoring hardware. Biologically active compounds may produce idiosyncratic effects which are entirely unpredictable on the basis of literature searches and prior clinical experience (both recent and past).

Exposure controls

Appropriate engineering controls	**For potent pharmacological agents:** **Solutions Handling:** ‣ Solutions can be handled outside a containment system or without local exhaust ventilation during procedures with no potential for aerosolisation. If the procedures have a potential for aerosolisation, an air-purifying respirator is to be worn by all personnel in the immediate area. ‣ Solutions used for procedures where aerosolisation may occur (e.g., vortexing, pumping) are to be handled within a containment system or with local exhaust ventilation. ‣ In situations where this is not feasible (may include animal dosing), an air-purifying respirator is to be worn by all personnel in the immediate area. If using a ventilated enclosure that has not been validated, wear a half-mask respirator equipped with HEPA cartridges until the enclosure is validated for use. ‣ Ensure gloves are protective against solvents in use. **Unless written procedures, specific to the workplace are available, the following is intended as a guide:** ‣ **For Laboratory-scale handling of Substances assessed to be toxic by inhalation.** ***Quantities of up to 25 grams*** may be handled in Class II biological safety cabinets *; ***Quantities of 25 grams to 1 kilogram*** may be handled in Class II biological safety cabinets* or equivalent containment systems; ***Quantities exceeding 1 kg*** may be handled either using specific containment, a hood or Class II biological safety cabinet*, ‣ HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours. ‣ The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated. Dependent on levels of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated. When handling: ***Quantities of up to 25 grams***, an approved respirator with HEPA filters or cartridges should be considered; ***Quantities of 25 grams to 1 kilogram,*** a half-face negative pressure, full negative pressure, or powered helmet-type air purifying respirator should be considered. ***Quantities in excess of 1 kilogram*****,** a full face negative pressure, helmet-type air purifying, or supplied air respirator should be considered. Written procedures, specific to a particular work-place, may replace these recommendations * For Class II Biological Safety Cabinets, Types B2 or B3 should be considered. Where only Class I, open fronted Cabinets are available, glove panels may be added, Laminar flow cabinets do not provide sufficient protection when handling these materials unless especially designed to do so. **Pilot Plant and Production** ‣ Wear appropriate gloves; lab coat, nylon coveralls or disposable Tyvek suit; safety glasses, safety shoes, and disposable booties. Use good manufacturing practices (i.e., cGMPs). ‣ Protective garment (coveralls, Tyvek, lab coat) is not to be worn outside the work area. ‣ Clean/dirty/decontamination areas are to be established. ‣ Negative/positive air pressure relationships and buffer zones required (i.e., ante-room/degowning room/airlock). ‣ Area access is to be restricted. ‣ High-energy operations such as milling, particle sizing, spraying or fluidising should be done within an approved emission control or containment system. ‣ Develop cleaning procedures and techniques that limit potential exposure **For potent pharmacological agents:** **Powders** To prevent contamination and overexposure, no open handling of powder should be allowed. ‣ Powder handling operations are to be done in a powders weighing hood, a glove box, or other equivalent ventilated containment system. ‣ In situations where these ventilated containment hoods have not been installed, a non-ventilated enclosed containment hood should be used. ‣ Pending changes resulting from additional air monitoring data, up to 300 mg can be handled outside of an enclosure provided that no grinding, crushing or other dust-generating process occurs. ‣ An air-purifying respirator should be worn by all personnel in the immediate area in cases where non-ventilated containment is used, where significant amounts of material (e.g., more than 2 grams) are used, or where the material may become airborne (as through grinding, etc.). ‣ Powder should be put into solution or a closed or covered container after handling. ‣ If using a ventilated enclosure that has not been validated, wear a half-mask respirator equipped with HEPA cartridges until the enclosure is validated for use. **Solutions Handling:** ‣ Solutions can be handled outside a containment system or without local exhaust ventilation during procedures with no potential for aerosolisation. If the procedures have a potential for aerosolisation, an air-purifying respirator is to be worn by all personnel in the immediate area. ‣ Solutions used for procedures where aerosolisation may occur (e.g., vortexing, pumping) are to be handled within a containment system or with local exhaust ventilation. ‣ In situations where this is not feasible (may include animal dosing), an air-purifying respirator is to be worn by all personnel in the immediate area. If using a ventilated enclosure that has not been validated, wear a half-mask respirator equipped with HEPA cartridges until the enclosure is validated for use. ‣ Ensure gloves are protective against solvents in use.
Individual protection measures, such as personal protective equipment	
Eye and face protection	For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs: ‣ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ‣ Face shield. Full face shield may be required for supplementary but never for primary protection of eyes ‣ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].
Skin protection	See Hand protection below

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Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: · frequency and duration of contact, · chemical resistance of glove material, · glove thickness and · dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. · Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: · Excellent when breakthrough time > 480 min · Good when breakthrough time > 20 min · Fair when breakthrough time < 20 min · Poor when glove material degrades For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. ▸ Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference. ▸ Double gloving should be considered. ▸ PVC gloves. ▸ Change gloves frequently and when contaminated, punctured or torn. ▸ Wash hands immediately after removing gloves. ▸ Protective shoe covers. [AS/NZS 2210] ▸ Head covering.
Body protection	See Other protection below
Other protection	▸ For quantities up to 500 grams a laboratory coat may be suitable. ▸ For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs. ▸ For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers. ▸ For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection. ▸ Eye wash unit. ▸ Ensure there is ready access to an emergency shower. ▸ For Emergencies: Vinyl suit

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+			Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Continued...

Appearance	Yellow coloured liquid.

Physical state	Liquid	**Relative density (Water = 1)**	1.05
Odour	Characteristic	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	6.4	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (mm2/s)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	Not Available	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Partly miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable. ‣ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

a) Acute Toxicity	There is sufficient evidence to classify this material as acutely toxic.
b) Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
c) Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.
i) STOT - Repeated Exposure	There is sufficient evidence to classify this material as toxic to specific organs through repeated exposure
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce severely toxic effects; these may be fatal. Strong evidence exists that exposure to the material may produce very serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by inhalation. The material is not classified as causing respiratory irritation under Regulation (EC) No 1272/2008 (CLP), as amended. Nevertheless, inhalation of vapours, fumes or aerosols, particularly following prolonged exposure, may cause respiratory discomfort and, occasionally, respiratory distress. Inhalation of dusts, generated by the material, during the course of normal handling, may produce severely toxic effects; these may be fatal.
Ingestion	Strong evidence exists that exposure to the material may produce very serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by swallowing.

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	Severely toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 5 gram may be fatal or may produce serious damage to the health of the individual.
Skin Contact	Skin contact with the material may produce toxic effects; systemic effects may result following absorption. Strong evidence exists that exposure to the material may produce very serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by skin contact. The liquid may be miscible with fats or oils and may degrease the skin, potentially producing a non-allergic contact dermatitis. The material is not classified as a skin irritant under Regulation (EC) No 1272/2008 (CLP), as amended.
Eye	Although the liquid is not classified as an eye irritant under Regulation (EC) No 1272/2008 (CLP), as amended, direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests. Exposure to the material may cause concerns for human fertility, generally on the basis that results in animal studies provide sufficient evidence to cause a strong suspicion of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects. Exposure to the material may cause concerns for humans owing to possible developmental toxic effects, generally on the basis that results in appropriate animal studies provide strong suspicion of developmental toxicity in the absence of signs of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of other toxic effects. Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.

Apparent Onslaught Insecticide	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
fipronil	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 354 mg/kg[2]	Not Available
	Inhalation (Rat) LC50: 0.001 mg/L4h[2]	
	Oral (Rat) LD50: 97 mg/kg[2]	

Legend:	***1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances***

FIPRONIL	Negative in Ames and chromosome aberration tests. * ADI: 0.0002 mg/kg/day NOEL: 0.02 mg/kg/day technical fipronil
Apparent Onslaught Insecticide & FIPRONIL	A GABAergic substance. The material may mimic the actions of the major inhibitory neurotransmitter of the brain, GABA, (gamma-aminobutyric acid) in inhibiting the electrical activity of certain elements of the nervous system. GABA is a putative amino-acid, produced within certain neurones (presynaptic cells) and is released into the synapse, between neurones, on the arrival of an action potential; GABA then interacts with post-synaptic neurones, slowing their rate of firing. Certain GABA congeners may produce lightheadedness, ataxia, mood elevation and muscle incoordination. Side-effects of uptake of GABA analogues and congeners (such as the isoxazole derivative, muscimol, isolated from hallucinogenic mushrooms), by neurones, may include dizziness, ataxia, euphoria, muscle twitches, and initial psychic stimulations followed by dream-filled sleep. More severe ingestions may produce visual disturbances, fever, confusion, myoclonus, mydriasis, seizures and coma. Residual headache may persist for several days. The congener muscimol is structurally related to GABA, crosses the blood-brain barrier easily, in contrast to GABA, and inhibits the firing of some central neurones. GABA, when introduced directly to the brain by injection (i.e. intrathecally), produces the same effect and similar outcomes to those produced by muscimol. One subtype of receptor for GABA, the GABA-A receptor also contains binding sites for anxiolytic barbiturates, benzodiazepines, neurosteroids and, probably, ethanol. These anxiolytic groups potentiate the function of the chloride channels linked to the receptor. GABAergic drugs which act via allosteric agonism of the GABA-A receptor at the beta-subreceptor similar to barbiturates. In contrast, benzodiazepines act at the alpha-subreceptor. As such, carbamates and barbiturates, possess analgesic properties which the benzodiazepine class of drugs do not. Another amino-acid, with a similar structure to both GABA and muscimol, is ibotenic acid (also derived from mushrooms). Effects of ingestion are similar to those produced by muscimol. Ibotenic acid, however, binds to a different receptor, NMDA, which is normally activated by the putative neurotransmitter glutamic acid but now is inhibited by the action of ibotenic acid. NMDA receptors, in contrast to GABA receptors, when activated, normally cause neurones to fire. Systemic administration of ibotenic acid and muscimol to laboratory animals produces central inhibition of motor activity with little change to peripheral autonomic activity. Both compounds induce EEG changes in cats, rabbits and rats and thus within the central nervous system both compounds behave as false inhibitory neurotransmitters. GABA and its congeners inhibit the excitation of cells, of neurological origin, by allowing anions, such as chlorine, to enter the cell thus altering the electric potential of the cell. The GABA receptor acts as a gateway for influx of chloride ion. The whole receptor complex can be formed only by the interaction of several individual subunits, each of which is a membrane-spanning protein. Several different types of subunit have been identified and named the alpha-, beta-, and delta- subunits. The receptor may be made from any of up to five possible combinations of these subunits so that the number of possible subtypes of GABA-A receptor is huge and may, in part, explain their variable response to each anxiolytic agent. However, receptors made from any combination of two or three subunit types express much of the function of the native receptor. CYP1 enzyme activators can lead to adverse effects, primarily due to their role in metabolizing various compounds, including some that are toxic. These effects can range from increased risk of certain cancers and other toxicities to drug interactions and developmental issues. he human cytochrome P450 (CYP) 1A1 gene encodes a monooxygenase that metabolizes multiple exogenous and endogenous substrates. CYP1A1 has become infamous for its oxidative metabolism of benzo[a]pyrene and related polycyclic aromatic hydrocarbons, converting these chemicals into very potent human carcinogens. CYP1A1 expression is mainly controlled by the aryl hydrocarbon receptor (AHR), a transcription factor whose activation is induced by binding of persistent organic pollutants, including polycyclic aromatic hydrocarbons and dioxins. Accordingly, induction of CYP1A1 expression and activity serves as a biomarker of AHR activation and associated xenobiotic metabolism as well as toxicity in diverse animal species and humans. Determination of CYP1A1 activity is integrated into modern toxicological concepts and testing guidelines, emphasizing the tremendous importance of this enzyme for risk assessment and regulation of chemicals. Further, CYP1A1 serves as a molecular target for chemoprevention of chemical carcinogenesis, although present literature is controversial on whether its inhibition or induction exerts beneficial effects. Regarding therapeutic applications, first anti-cancer prodrugs are available, which require a metabolic activation by CYP1A1, and thus enable a specific elimination of CYP1A1-positive tumors. However, the application range of these drugs may be limited due to the frequently observed downregulation of CYP1A1 in various human cancers,

Continued...

probably leading to a reduced metabolism of endogenous AHR ligands and a sustained activation of AHR and associated tumor-promoting responses. We here summarize the current knowledge on CYP1A1 as a key player in the metabolism of exogenous and endogenous substrates and as a promising target molecule for prevention and treatment of human malignancies
For fipronil
Acute toxicity: Clinical signs and symptoms reported after ingestion of fipronil by humans include sweating, nausea, vomiting, headache, abdominal pain, dizziness, agitation, weakness, and tonic clonic-seizures. Clinical signs of exposure to fipronil are generally reversible and resolve spontaneously
Fipronil targets the nervous system. Signs of toxicity during an acute mouse feeding study with 87.4-97.2% fipronil included overactivity, irritability, convulsions, and death
The primary metabolite of fipronil in army worms, mice, and humans is fipronil-sulfone, which binds to the GABA receptor with an affinity 6 times greater than the parent compound. Fipronil and its sulfone have similar toxicity in mammals; the mouse ip LD50 24 h after treatment is 41 and 50 mg/kg for fipronil and its sulfone, respectively.
Fipronil-desulfinyl, the primary photoproduct in the environment, is 9-10 fold more potent and more acutely toxic than fipronil with an ip LD50 of 23 mg/kg in mice
Distribution: After exposure fipronil is widely distributed in mammals and is found predominantly in fatty tissues. Rats given a single oral dose had the highest concentrations of fipronil in the stomach, GI tract, fat, and adrenals. Moderate levels were found in the liver, pancreas, thyroid, and ovaries. Low levels were present in the muscle, brain, heart, and cardiac blood .
A spot-on treatment study with 14C-fipronil on dogs and cats reported radioactivity 2 months after treatment concentrated in the sebaceous glands, epithelial layers surrounding the hairs, and exposed part of the hair shaft, suggesting the passive diffusion of fipronil in the sebum covering hair and skin .
Researchers applied a spot-on fipronil product to dogs and vigorously petted them for 5 minutes every day with cotton gloves to mimic normal exposures to treated animals. Residues transferred to the gloves peaked at 589+/-206 ppm fipronil 24 h after treatment, decreased steadily over time (448 +/- 118 ppm after 8 days) , and were undetectable after 36 days
Absorption: In an ***in vitro*** study of 14C-fipronil absorption through human, rabbit, and rat epithelial membranes, researchers recorded penetration rates after 8 hours of 0.08% (rat), 0.07% (rabbit), and 0.01% (human) of the dose of 200 g/L fipronil solution. Researchers reported greater absorption from a 0.2 g/L solution of fipronil, with 0.9% (rat), 13.9% (rabbit), 0.9% (humans) of the dose being absorbed
Metabolism: The whole-blood half-life of fipronil in rats ranged from about 6.2-8.3 days after a single 4 mg/kg oral dose and decreased significantly to 2.1-2.3 days after a single 150 mg/kg oral dose. The primary metabolite of fipronil in animals is the fipronil-sulfone derivative. Researchers injected mice with fipronil and detected the sulfone derivative in the brain, liver, kidney, fat, and faeces . Fipronil-desulfinyl, the primary photodegradate of fipronil, has been measured in the fat, brain, liver, kidney, skin, and feces of mice, rats and lactating goats after oral exposure or injection .
Excretion: Rats given an oral dose of fipronil excreted 45-75% in the faeces and 5-25% in the urine. The parent compound and the oxidation product, fipronil-sulfone, were present in both.
Chronic toxicity: Signs of toxicity during a chronic rat feeding study included reduced feeding, reduced body weight gain, seizures (including seizures resulting in death), alterations in thyroid hormones, and alterations in the mass and function of the liver, thyroid, and kidneys. No signs of systemic toxicity (NOEL) were observed in rats ingesting 0.5 ppm (0.019-0.025 mg/kg/day) during a 52-week chronic dietary study. The lowest dosage at which effects were observed (LOEL) was 1.5 ppm (0.059 mg/kg/day males, 0.078 mg/kg/day females), and included increased incidence of seizures and death, alteration in clinical chemistry (protein), and alterations in thyroid hormones
Carcinogenicity: Mice given fipronil in their diet for 2 years showed no evidence of carcinogenicity at doses of 30 ppm .• Researchers administered fipronil in the diet of rats for 2 years. Carcinogenicity was observed at 12.68 mg/kg/day in males and 16.75 mg/kg/day in females based on an increased incidence of clinical signs and alterations in clinical chemistry and thyroid parameters. In one study, rats were fed 0, 0.5, 2, 6, and 10 ppm (0, 0.025, 0.098, and 0.050 mg/kg/day males, and 0, 0.032, 0.13, and 0.55 mg/kg/day females) fipronil-desulfinyl (the primary photodegradate), for 2 years. Male rats at 10 ppm and female rats at 2, 6, and 10 ppm developed clinical signs of toxicity with no evidence of carcinogenicity (13).
The US EPA classified fipronil as a Group C (possible human) carcinogen, based on increased thyroid follicular cell tumors in both sexes of rats.
Mutagenicity: Fipronil did not cause mutations in human lymphocytes, Chinese hamster V79 cells, salmonella (Ames test), or mouse micronuclei
Reproductive and developmental toxicity: In one study with rats, no observable effects were recorded at 30 ppm (2.54 mg/kg/day in males, and 2.74 mg/kg/day in females; route of exposure not included). The lowest dosage at which reproductive effects were recorded was 300 ppm (26.0 mg/kg/day in males and 28.4 mg/kg/day in females; route of exposure not included) based on clinical signs of toxicity, decreased litter size, decreased body weights, decrease in percentage of animals mating, reduction in fertility index, reduced post-implantation survival and offspring postnatal survivability, and delay in physical development. Other experimental studies with ingestion of fipronil have not reported significant alterations on animal development. There were no observable adverse effects within the limits of two studies performed using rats and rabbits. The Lowest Observable Adverse Effect Levels (LOAELs) were the highest doses tested: .20 and .1.0 mg/kg/day in rats and rabbits, respectively

Acute Toxicity	✔	**Carcinogenicity**	✘
Skin Irritation/Corrosion	✘	**Reproductivity**	✘
Serious Eye Damage/Irritation	✘	**STOT - Single Exposure**	✘
Respiratory or Skin sensitisation	✘	**STOT - Repeated Exposure**	✔
Mutagenicity	✘	**Aspiration Hazard**	✘

Legend: ✘ ***– Data either not available or does not fill the criteria for classification***
✔ ***– Data available to make classification***

SECTION 12 Ecological information

Toxicity

Apparent Onslaught Insecticide

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

fipronil

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	0.27-1.12mg/l	4
EC50	48h	Crustacea	<0.001mg/L	4
NOEC(ECx)	4h	Crustacea	<0.001mg/L	4
EC50	96h	Algae or other aquatic plants	0.631mg/L	4
LC50	96h	Fish	0.005-0.023mg/L	4

Continued...

Legend:	***Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data 8. User defined data***

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
For fipronil
Solubilities Water (pH = 5): 0.0024 g/l (pH = 9): 0.0022 g/l
Melting Point (Technical Grade) : 195.5-203 C
Vapor Pressure : 3.7 x 10-4 mPa @ 25 C
Henry's Law Constant : 3.7 x 10-5 (Pa m3/mol)
log Kow = 4.01
Koc (average value) = 803
Hydrolysis Half-lives : @ 22 C: (pH 9.1) = 1,100 days, (pH 7.1) = 1,390 days : @32°C: (pH 9.1) = 11.3 days, (pH 7.1) = 15.6 days
Aqueous Photolysis : 4.1 Hours (pH 5.5)
Aerobic Aquatic Half-Life : 14.5 days
Soil Photolysis : 34 days
Field Dissipation Half-Life : 102-160 days
Aerobic Soil Half-life : 630-693 days
Anaerobic Soil Half-life : 123 days
Environmental fate:
Due to its very low vapor pressure and Henry's Law constant, fipronil is not likely to be found in the air. Fipronil is readily transformed into its desulfinyl photodegradate when exposed to sunlight. This photoproduct has a high affinity for insect GABA regulated chloride channels. Consequently, the photoproduct is neurotoxic toward insects.
Water: Laboratory data indicate that fipronil is much more susceptible to breakdown through photolysis rather than hydrolysis in water. Under environmental pHs fipronil is stable to hydrolysis with a half-life of 1390 days at pH 7.1 (22 C). The laboratory photolytic halflife was 4.1 hours; suggesting that photolysis is a more important pathway for the degradation of aqueous fipronil. Fipronil degrades rapidly in water when exposed to UV light to form fipronil-desulfinyl. Under these conditions, fipronil has a half-life of 4 to 12 hours . Fipronil-desulfinyl photodegrades in aerated and static water with recorded half-lives of 120+/-18 and 149 +/- 39 hours, respectively. Fipronil is stable to hydrolysis at pH 5 and pH 7. Hydrolysis of fipronil is only important at a very basic pH. The hydrolysis half-lives for pH of 12 and 9 in aqueous solutions were 0.1 and 32 days, respectively. Fipronil-amide is the primary residue formed from hydrolysis
A reported field half-life of fipronil under aerobic aquatic conditions was 14.5 days. In an aerobic metabolism study fipronil readily partitioned from the aqueous layer into the sediment, with most of the fipronil reaching the sediment layer within seven days after application.
Soil: The half-life of fipronil has been measured at 122-128 days in aerobic soils. Under aerobic conditions, naturally occurring soil organisms break down fipronil to form fipronil sulfone. Fipronil can also be hydrolysed to form fipronil-amide Fipronil tends to dissipate by soil binding along with gradual microbial breakdown; however, on the soil surface photolysis may also be important. The major metabolite was the sulfide degradate. The extractable radioactive fipronil decreased from 99.46% of the applied dose to 4.07% at 60 days of incubation to non-detectable at 12 months. The major metabolite in anaerobic aquatic conditions was the sulfide degradate while both the amide and sulfone were products of aerobic soil conditions. Fipronil degrades on soil surfaces from ultraviolet radiation (i.e. sunlight) to form fipronil-desulfinyl, and has a measured half-life of 34 days in loamy soil. However, soil particles may prevent light from penetrating any significant depth under field conditions and increase residence time. There was no evidence of volatility of fipronil and its metabolites .
Fipronil has low mobility in soil and is not expected to leach into groundwater. After soil treatment, fipronil usually does not travel further than the upper 6 inches of soil, and significant lateral movement is not expected .Koc values for fipronil range from 427-1248 in sandy loam but will vary depending on clay and organic carbon content. The Koc is 3946 +/- 2165 for fipronil-sulfide and 2010 +/- 1370 for fipronil-desulfinyl
Fipronil and fipronil-desulfinyl are less volatile than water and can concentrate under field conditions
Air: The vapour pressure for fipronil is 3.7 x 10-4 mPa (25 C). Photodegradation studies in soil found no evidence of volatility of fipronil or its metabolites
Bioaccumulation and Bioconcentration: Fipronil accumulates in fish with a bioconcentration factor of 321 for whole fish, 164 for edible tissue, and 575 for non-edible tissue. Fish eliminated fipronil completely 14 days after being transferred to clean water. The primary metabolites in fish are fipronil-sulfone and -sulfide
When applied to water, fipronil varies greatly in its toxicity and potential to bioaccumulate in aquatic arthropods depending, on the species
Plants: Fipronil is not well absorbed by plants after soil treatment (about 5%) and partially degrades in plants to the sulfone and amide derivatives. Fipronil applied to foliage partially photodegrades to form fipronil-desulfinyl
Ecotoxicity:
Fipronil is highly toxic to bobwhite quail and pheasants.
Fipronil is highly to very highly toxic to marine and freshwater fish
Fipronil is highly toxic to honeybees by contact and ingestion when applied to plant foliage
Non toxic to earthworms.
Fish LC50 (96): rainbow trout 0.248 mg/l; bluegill sunfish 0.085 mg/l; sheepshead minnow 0.13 mg/l; Japanese carp 0.34 mg/l
In one study, male copepods reared in a 0.63 ug/L fipronil solution had a 75-89% decrease in reproductive success. Carry-over effects were significant for males (but not females) moved to clean seawater three days before mating
Mysid Shrimp LC50 (96 h): 140 ng/l
Exposure to less than 5.0 ng/L fipronil affected mysid growth, reproduction, and survival
Daphnia LC50 (48 h): 0.19 mg/l
Birds Acute LD50 mallard duck >2150 mg/kg; bobwhite quail 11.3 mg/kg; pheasants 31 mg/kg
Bird dietary LC50 (5-d): mallard duck >5,000 mg/kg; bobwhite quail 49 mg/kg
Chronic Toxicity
Invertebrate (Daphnia) Life Cycle NOEC: 0.0098 ppm
Mallard Reproduction NOEC: 1000 ppm
Bobwhite Reproduction NOEC: 10 ppm
Fish (Rainbow Trout) Early Life Stage NOEC: 0.0066 ppm
Fish (Rainbow Trout) Early Life Stage LOEC: 0.015 ppm
The degradation products of fipronil are high to highly acutely toxic to rainbow trout, bluegill sunfish, and freshwater invertebrates. The sulfone degradate is 6.3 times more toxic to rainbow trout, 3.3 times more toxic to bluegill sunfish, and 6.6 times more toxic to freshwater invertebrates. The sulfide degradate is 1.9 times more toxic to freshwater invertebrates. The sulfone degradate is very highly toxic to upland game birds and moderately toxic to waterfowl on an acute oral basis.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
fipronil	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
fipronil	HIGH (LogKOW = 5.3235)

Mobility in soil

Ingredient	Mobility
fipronil	LOW (Log KOC = 30930)

Continued...

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	‣ Containers may still present a chemical hazard/ danger when empty. ‣ Return to supplier for reuse/ recycling if possible. Otherwise: ‣ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ‣ Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: ‣ Reduction ‣ Reuse ‣ Recycling ‣ Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. ‣ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ‣ It may be necessary to collect all wash water for treatment before disposal. ‣ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ‣ Where in doubt contact the responsible authority. ‣ Recycle wherever possible or consult manufacturer for recycling options. ‣ Consult State Land Waste Authority for disposal. ‣ Bury or incinerate residue at an approved site. ‣ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	
HAZCHEM	2X

Land transport (ADG)

14.1. **UN number or ID number**	2588
14.2. **UN proper shipping name**	PESTICIDE, SOLID, TOXIC, N.O.S. (contains fipronil)
14.3. **Transport hazard class(es)**	Class: 6.1 Subsidiary Hazard: Not Applicable
14.4. **Packing group**	III
14.5. **Environmental hazard**	Environmentally hazardous
14.6. **Special precautions for user**	Special provisions: 61 223 274 Limited quantity: 5 kg

Air transport (ICAO-IATA / DGR)

14.1. **UN number**	2588
14.2. **UN proper shipping name**	Pesticide, solid, toxic, n.o.s. * (contains fipronil)
14.3. **Transport hazard class(es)**	ICAO/IATA Class: 6.1 ICAO / IATA Subsidiary Hazard: Not Applicable ERG Code: 6L
14.4. **Packing group**	III
14.5. **Environmental hazard**	Environmentally hazardous
14.6. **Special precautions for user**	Special provisions: A3 A5 Cargo Only Packing Instructions: 677 Cargo Only Maximum Qty / Pack: 200 kg

Continued...

Passenger and Cargo Packing Instructions	670
Passenger and Cargo Maximum Qty / Pack	100 kg
Passenger and Cargo Limited Quantity Packing Instructions	Y645
Passenger and Cargo Limited Maximum Qty / Pack	10 kg

Sea transport (IMDG-Code / GGVSee)

14.1. **UN number**	2588
14.2. **UN proper shipping name**	PESTICIDE, SOLID, TOXIC, N.O.S. (contains fipronil)
14.3. **Transport hazard class(es)**	IMDG Class: 6.1 IMDG Subsidiary Hazard: Not Applicable
14.4. **Packing group**	III
14.5 **Environmental hazard**	Marine Pollutant
14.6. **Special precautions for user**	EMS Number: F-A, S-A Special provisions: 61 223 274 Limited Quantities: 5 kg

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
fipronil	Not Applicable

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
fipronil	Not Applicable

SECTION 15 Regulatory information

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

fipronil is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (fipronil)
Canada - DSL	No (fipronil)
Canada - NDSL	No (fipronil)
China - IECSC	Yes
Colombia - Colombia National Industrial Chemicals Inventory	No (fipronil)
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	No (fipronil)
USA - TSCA	No (fipronil)
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
UAE - Control List (Banned/Restricted	Yes

Continued...

National Inventory	Status
Substances)	
Legend:	***Yes = All CAS declared ingredients are on the inventory*** ***No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.***

SECTION 16 Other information

Revision Date	30/10/2026
Initial Date	30/10/2026

SDS Version Summary

Version	Date of Update	Sections Updated
2.1	30/10/2026	Physical and chemical properties - Appearance, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit。
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code

- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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end of SDS