



Gharda Chemicals Limited

SAFETY DATA SHEET NAVIGATOR® SC Termiticide/Insecticide

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

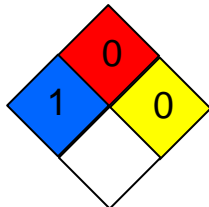
| | | | |
|------------------------------------|---|---------------------------|--------------------------------|
| Date: 04/20/16 | CAS Number | EINECS Number | EPA Registration Number |
| Insecticide Formulation | 120068-37-3 | 424-610-5 | 84836-18-33658 |
| Regional Office: | Gharda Chemicals Limited 660 Newtown-Yardley Road Newtown, PA 18940 Phone: 1-215-968-9474 Fax: 1-215-968-9574 | | |
| Emergency Telephone Numbers | For Spills Call: | CHEMTREC: 1-800-424-9300 | |
| | For Medical Call: | ProPharma: 1-866-359-5660 | |
| E-mail: sramanathan@gharda.com | | | |

2 Hazards identification

Classification of Substance or Mixture

EMERGENCY OVERVIEW

EPA SIGNAL WORD: CAUTION



GHS08 H302 Harmful if swallowed.

Acute Tox. 4 Oral



GHS09 H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Aquatic Chronic 1



N
Dangerous for the Environment

R 51-53: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment: Not applicable

Label elements

Hazard pictograms



GHS08 GHS09

Signal Word

Caution

Hazard determining component of labelling:

Hazard statements

H302 Harmful if swallowed.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves, protective clothing, eye and face protection.
P261 Avoid breathing dust, fumes, gas, mist, vapours, spray.
P264 Wash thoroughly after handling.
P270 DO NOT eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301+P310 IF SWALLOWED: Immediately Call a POISON CENTER or doctor/physician.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P311 Call a POISON CENTER or doctor/physician.
P321 Specific treatment (see.... on this label)
P330 Rinse mouth.
P391 Collect spillage.
P403/233 Store in well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local, regional, national, international regulations.

3 Composition/information on ingredients

Chemical characterization:

| DESCRIPTION | CAS No. | EINECS Number | w/w % |
|--|-------------|---------------|-------|
| Fipronil | 120068-37-3 | 424-610-5 | |
| 5-amino-1-(2,6-dichloro-4-(trifluoromethyl)phenyl)-4-((1,R,S)- (trifluoromethyl)sulfinyl)-1-H-pyrazole-3-carbonitril | | | 9.10 |
| Other ingredients | ----- | ----- | 90.90 |

4 First aid measures

IF Swallowed: Call poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. DO NOT give any liquid to the person. DO NOT induce vomiting unless told to do so by the poison control center or doctor.

If Inhaled: Remove person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

If in Eyes: 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 poison control center or doctor for treatment advice.

Note to Physician: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred. In severe cases of overexposure by oral ingestion, lethargy, muscle tremors, and in extreme cases, possibly convulsions may occur.

5 Firefighting measures

FIRE

Small Fire: Dry chemical, CO₂ or water spray.

Large Fire: Water spray, fog or regular foam.

Move containers from fire area if you can do it without risk.

Dike fire-control water for later disposal; DO NOT scatter the material.

Use water spray or fog; DO NOT use straight streams.

Fire involving Tanks or Car/Trailer Loads:

Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

DO NOT get water inside containers.

Cool containers with flooding quantities of water until well after fire is out.

Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

ALWAYS stay away from tanks engulfed in fire.

For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

FIRE OR EXPLOSION

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Containers may explode when heated.

Runoff may pollute waterways.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

6 Accidental release measures

For immediate precautionary measures, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids.

Keep unauthorized personnel away.
Stay upwind.
Keep out of low areas.

SPILLS: For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Soak up spilled material with sand, earth or other suitable material and dispose of as pesticide waste. Take special care to avoid contamination of equipment and facilities during clean up procedures and disposal of wastes. Refer to Precautionary Statements on label for hazards associated with the handling of this material. DO NOT walk through spilled material. In spill or leak incidents, keep unauthorized people away. **You may contact the CHEMTREC Emergency Response for decontamination procedures.**

For Chemical Spill, Leak, Fire, Exposure, or Accident you may call CHEMTREC at 1-800-424-9300 twenty-four (24) hours per day, seven (7) days per week.

7 Handling and storage

Handling - information for safe handling:

Keep away from food, drink and animal foodstuff.

Avoid contact with skin and eyes.

Ensure good ventilated, exhaustion at the workplace.

Keep away from heat and direct sunlight. Store in cool, dry place in tightly closed receptacle.

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt and long pants, socks, shoes and chemical resistant gloves. All pesticide handlers must wear a dust/mist filtering respirator (NSHA/NIOSH approval number prefix TC-21C), or, a NIOSH approved respirator with any N R P or HE filter when working in a non-ventilated space including, but not limited to, crawl-spaces and basements. All pesticide handlers must wear protective eyewear (goggles, a face shield or safety glasses with front brow and temple protection) when working in a non-ventilated space, including but not limited to crawl-spaces and basements or when applying termiticide by rodding or sub-slab injection.

Information about fire and explosion protection:

Protect against electrostatic charges.

Requirement to be met by storerooms and receptacles: Store in the original receptacles.

Unused product should be stored in its original container only, out of the reach of children and animals.

Information about storage in one common storage facility:

DO NOT store together with foodstuffs, beverages and feed.

DO NOT contaminate water, food, or feed by storage or disposal.

Further information about storage conditions:

Store in cool, dry conditions in well-sealed receptacles.
Protect from heat and direct sunlight.
Store receptacles in well ventilated area.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see Section 7 Control Parameters.

Ingredients with limit values that require monitoring at the work place: Not required.

Exposure Controls:

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt and long pants, socks, shoes and chemical resistant gloves. All pesticide handlers must wear a dust/mist filtering respirator (NSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N R P or HE filter when working in a non-ventilated space including, but not limited to, crawl-spaces and basements. All pesticide handlers must wear protective eyewear (goggles, a face shield or safety glasses with front brow and temple protection) when working in a non-ventilated space, including but not limited to crawl-spaces and basements or when applying termiticide by rodding or sub-slab injection.

General Protective and Hygienic Measure:

The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuff, beverages and feed.
Wash hands before breaks and at the end of the work.
Immediately remove all spoiled and contaminated clothing.
DO NOT eat, drink, smoke or sniff while working.
DO NOT inhale vapour.

Respiratory Protection

Respiratory single serving mask DIN EN 149 with filter FFP2

Protection for Hands

Protective Gloves: The glove material has to be impermeable and resistant to the product, the substance, and the preparation.

Material of Gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Choose chemical resistant gloves. Recommendations are gloves made of Nitrile Rubber (NBR, ≥ 0.38 mm thickness) Polyvinyl chloride (PVC, ≥ 0.7 mm thickness).

Eye Protection



Tightly sealed goggles

Wear goggles conforming to EN 166 (Field of use 5 or equivalent).

Body Protection

Protective clothing (EN 368, cat. 3, type:3+4+5+6)

Wear standard coverall and type 5 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.

Hygiene Measures

When using, do not eat, drink or smoke.

Wash hands before breaks and immediately after handling the product.

Protective Measures

Avoid contact with skin and eyes.

9 Physical and chemical properties

Information on basic physical and chemical properties.

General Information

Appearance

Form:

Suspension

Color:

Cream color to faint brown

Odor:

Odorless

pH

Slightly acidic

Melting point:

Not applicable

Boiling point:

100° C

Flash point:

>80° C

Flammability (solid, gaseous):

Product is not flammable

Evaporation rate

Not determined

Upper/Lower flammability or explosive limit

Non explosive

Vapour pressure

Relative density at 22°C

1.00 to 1.050 g/cm³ at 22° C

Solubility in/miscibility with water at 20 °C

1.9 mg/L in distilled water

(for Fipronil)

Solubility in organic solvents at 20 °C

Acetone 545, dichloromethane 22, Hexane 0.028, toluene 3 (all in g/l, 25° C).

(for Fipronil Technical)

Partition coefficient: n-octanol/ water

Not determined

Auto-ignition temperature

Not determined

Decomposition temperature

Not determined

Viscosity

Approx. 3000-6000 cp at 1.5 rpm Brookfield spindle no.2, at 30° C

Molecular Formula

C₁₂H₄Cl₂F₆N₄OS

Molecular Weight

437.2

10 Stability and reactivity

Reactivity

Chemical stability

Thermal Decomposition/Conditions to Avoid

No decomposition if used according to specifications.

Possibility of Hazardous Reaction.

No possibility of any hazardous reaction.

Incompatible Materials

Strong bases, strong acids and strong oxidizing agents.

Hazardous Decomposition Product

May emit toxic fumes under fire conditions.

11 Toxicological information

Information on Toxicological Effects

LD/LC50 Values Relevant for Classification

| | | |
|-----------------------------------|-----------------------|-------------------|
| Oral | LD50 | 1909 mg/kg (rat) |
| Dermal | LD50 | >5050 mg/kg (rat) |
| Inhalation | LC50 / 4h | >2.07 mg/L |
| Skin irritation | Non irritant | |
| Serious eye damage/irritation | Non irritant | |
| Respiratory or skin Sensitization | Non sensitizer | |
| Germ cell Mutagenicity | Non mutagenic | |
| Carcinogenicity | Non carcinogenic | |
| STOT - single exposure | Data is not available | |
| STOT - repeated exposure | Data is not available | |
| Aspiration | Data is not available | |
| Route of exposure: ingestion | Oral, inhalation | |

12 Ecological information

Toxicity

| Aquatic Toxicity | |
|---|--------------------|
| Daphnia LC 50/ 48 h | >380 µg/L |
| Bluegill Sunfish LC ₅₀ / 96 h | 170 µg/L |
| Rainbow Trout LC ₅₀ / 96 h | 500 µg/L |
| Birds LD50 | Pigeon >2000 mg/kg |
| Algae EC 50 Scenedesmus Subscpicatus (96 hours) | 0.14 mg/l |
| Bee LD50 | |
| Earthworm LD50 (14 day) | Non Toxic |

Persistence and Degradability

Not Easily Biodegradable

Additional Ecological Information

General notes - GHS Classification Category 1

Very toxic to water organism.

DO NOT allow product to reach ground water, water course or sewage system, even in small quantities.

Result of PBT and vPvB Assessment

PBT:

If released to air, a vapor pressure of 2.78×10^{-9} mm Hg at 25 deg. C indicates Fipronil will exist solely in the particulate phase in the atmosphere. Particulate phase Fipronil will be removed from the atmosphere by wet or dry deposition. Fipronil contains chromophores that absorb at wavelengths >290 nm and, therefore, may be susceptible to direct photolysis by sunlight. If released to soil, Fipronil is expected to have low to no mobility based upon Koc values of 825 to 6863. Photolytic half-lives in soil for Fipronil were reported as 147 to 217 hours. Fipronil is expected to biodegrade in soil and water based upon studies showing estimated degradation half-lives of 25.1 to 91.2 days in three sediments under aerobic conditions and 4.6 to 18.5 days for the same sediments under anaerobic conditions. If released into water, Fipronil is expected to adsorb to suspended solids and sediment based upon the Koc values. A whole body BCF of 321 in Bluegill suggests bio-concentration in aquatic organisms is high. Fipronil is stable to hydrolysis at pH 5.5 and pH 7, but has a hydrolysis half-life of 28 days at pH 9. An aqueous photolytic half-life for Fipronil was reported as 4.1 hours.

vPvB: Not Applicable

Environmental hazards.

This pesticide is toxic to birds, fish, and aquatic invertebrates. DO NOT apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighbouring areas. Care must be taken to avoid runoff. DO NOT contaminate water by cleaning equipment or disposal of wastes. DO NOT contaminate water when disposing of equipment, washwaters, or rinsate.

13 Disposal considerations

Waste Treatment Methods - Recommendation:

Must not be disposed together with household garbage. DO NOT allow product to reach sewage system. Must be specially treated adhering to official regulations.

Uncleaned Packaging – Recommendations:

Disposal must be made according to official regulations. DO NOT reuse empty containers, packages.

PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

14 Transport information

Land Transport ADR/RID (cross-border)



| | |
|---------------------------------|---|
| ADR/RID Class: | 9 |
| Danger Code (Kemler): | 660 |
| UN-Number: | 3082 |
| Packaging Group: | III |
| Special Marking: | Symbol (fish and tree) |
| UN Proper Shipping Name: | Environmentally hazardous substance, liquid, N.O.S. (Fipronil) |

Maritime Transport IMDG:



| | |
|------------------------------|---|
| IMDG Class: | 9 |
| UN-Number: | 3082 |
| Packaging Group: | III |
| EMS Number: | F-A, S-A |
| Marine Pollutant: | Yes, Symbol (fish & tree) |
| Proper Shipping Name: | Environmentally hazardous substance, liquid, N.O.S. (Fipronil) |

Air Transport ICAO-TI and IATA-DGR:



| | |
|------------------------------|---|
| IMDG Class: | 9 |
| UN-Number: | 3082 |
| Packaging Group: | III |
| EMS Number: | F-A, S-A |
| Marine Pollutant: | Yes, Symbol (fish & tree) |
| Proper Shipping Name: | Environmentally hazardous substance, liquid, N.O.S. (Fipronil) |

15 Regulatory information

DO NOT use this product for termite or other pest control indoors except for label-specified applications for termite control and foam applications to wall voids for control other listed pests.

DO NOT use on golf course turf. May be used for control of termites and other listed pests found on/near structures associated with golf courses, but only as specified on this label.

DO NOT use on/in commercial bee hives.

DO NOT use on animal trophies or animal skins.

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

National Regulations: Follow USEPA FIFRA

Risk and Safety Phrases.

| | |
|-----------|---|
| R 20/21 | Harmful by inhalation and in contact with skin. |
| R23 | Toxic by inhalation. |
| R36 | Irritating to eyes. |
| R 51-53 | Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. |
| R57 | Toxic to bees. |
| S2 | Keep out of reach of children. |
| S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection. |
| S43 | In case of fire use water spray and foam. DO NOT use water jet. |
| S60 | This material and its container must be disposed of as hazardous waste. |
| S61 | Avoid release to the environment. Refer special instructions/safety data sheet. |

Other Regulation, Limitations, and Prohibitive Regulations

In order to avoid risk for man and environment, keep to the user's instruction. Avoid any unnecessary contact with the product. Any misuse may cause health problems.

Chemical Safety Assessment: A chemical safety assessment has not been carried out.

16 Other information

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with federal, state, and local laws and regulations.

Department Issuing SDS: Supply Chain

Contact: sramanathan@gharda.com
Gharda Chemicals Limited
660 Newtown-Yardley Road
Newtown, PA 18940
215-968-9474

Abbreviations and acronyms:

| | |
|-----------------|--|
| ADR: | Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| RID: | Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) |
| IMDG: | International Maritime Code for Dangerous Goods |
| IATA: | International Air Transport Association (IATA) |
| ICAO: | International Civil Aviation Organization |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO) |
| GHS: | Globally Harmonized System of Classification and Labelling of Chemicals |
| EINECS: | European Inventory of Existing Commercial Chemical Substances |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society) |
| LC50: | Lethal Concentration, 50 percent |
| LD50: | Lethal Dose, 50 percent |