

Safety data sheet

Page: 1/14

BASF Safety data sheet according to Regulation (EC) No. 1907/2006

Date / Revised: 27.11.2012

Version: 3.0

Product: **FORMIDOR®**

(ID no. 30548462/SDS_GEN_GB/EN)

Date of print 20.04.2013

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

Product identifier

FORMIDOR®

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

Relevant identified uses: biocide

Details of the supplier of the safety data sheet

Company:

BASF plc

PO Box 4, Earl Road, Cheadle Hulme,

Cheadle, Cheshire

SK8 6QG, UNITED KINGDOM

Operating Division Crop Protection

Telephone: +49 621 60-27777

E-mail address: Produktinformation-Pflanzenschutz@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Label elements

According to Directive 67/548/EEC or 1999/45/EC

Classification/labelling in accordance with UK regulations.

Hazard symbol(s)

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N Dangerous for the environment.



R-phrases(s)

R52/53

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S35

This material and its container must be disposed of in a safe way.

Classification of the substance or mixture

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Mixtures

Chemical nature

Bait (ready for use) (RB), biocide

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Content (W/W): 0.05 %
 CAS Number: 120068-37-3
 EC-Number: 424-610-5

Acute Tox. 2 (Inhalation - dust)
 Acute Tox. 3 (oral)
 Acute Tox. 3 (dermal)
 STOT RE 1
 Aquatic Acute 1
 Aquatic Chronic 1
 H311, H330, H301, H400, H410, H372

| Sucrose

Content (W/W): < 45 %
CAS Number: 57-50-1
EC-Number: 200-334-9

Hazardous ingredients

according to Directive 1999/45/EC

| fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Content (W/W): 0.05 %
CAS Number: 120068-37-3
EC-Number: 424-610-5
Hazard symbol(s): T, N
R-phrases: 23/24/25, 48/25, 50/53

| Sucrose

Content (W/W): < 45 %
CAS Number: 57-50-1
EC-Number: 200-334-9

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

4. First-Aid Measures

Description of first aid measures**|** Remove contaminated clothing.

Show container, label and/or safety data sheet to physician.

If inhaled:

| Keep patient calm, remove to fresh air.

On skin contact:

| Wash thoroughly with soap and water.

On contact with eyes:

| Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

| Rinse mouth and then drink plenty of water.**Most important symptoms and effects, both acute and delayed**

Symptoms: No significant reaction of the human body to the product known.

Indication of any immediate medical attention and special treatment needed

| Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

carbon dioxide, dry powder, water spray, foam

Unsuitable extinguishing media for safety reasons:

water jet

Special hazards arising from the substance or mixture

carbon monoxide, Carbon dioxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, sulfur oxides, organochloric compounds

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Keep containers cool by spraying with water if exposed to fire.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing. Use personal protective clothing.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environment Agency (England & Wales), the Scottish Environmental Protection Agency (Scotland), or the Environment and Heritage Service (Northern Ireland) if it enters surface or ground waters. Keep people and animals away.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage

Precautions for safe handling

When using do not eat, drink or smoke. Ensure thorough ventilation of stores and work areas. No special measures necessary if stored and handled correctly. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

Refer to the current edition of HSE Guidance Note EH40 Occupational Exposure Limits (United Kingdom). For normal use and handling refer to the product label/leaflet. In all other cases the following apply.

57-50-1: Sucrose

TWA value 10 mg/m³ (WEL/EH 40 (UK))

STEL value 20 mg/m³ (WEL/EH 40 (UK))

Exposure controls

Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact

(Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. Keep away from food, drink and animal feeding stuffs. Store work clothing separately.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	gel
Colour:	blue violet
Odour:	characteristic
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 5 - 7 (approx. 20 °C)
Melting point:	not determined
Boiling point:	103 °C
Flash point:	> 105 °C
Evaporation rate:	not applicable
Flammability:	not highly flammable
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Ignition temperature:	not determined
Vapour pressure:	The product has not been tested.
Density:	approx. 1.25 g/cm ³ (20 °C)
Relative vapour density (air):	not determined
Solubility in water:	The data given are those of the active ingredient. approx. 0.00378 g/l (approx. 20 °C)

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

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Partitioning coefficient n-octanol/water (log Kow): 4.0
(20 °C)

Thermal decomposition: not determined
Viscosity, dynamic: 66 mPa.s
(20 °C)
Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

Other information

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See MSDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
strong bases, strong acids, strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Experimental/calculated data:

LD50 rat (oral): 92 mg/kg

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Experimental/calculated data:

LC50 rat (by inhalation): 0.36 mg/l 4 h

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Experimental/calculated data:

LD50 rabbit (dermal): 354 mg/kg

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant

Respiratory/Skin sensitization

Assessment of sensitization:

The product has not been tested. The statement has been derived from the properties of the individual components. Skin sensitizing effects were not observed in animal studies.

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Experimental/calculated data:

Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity**Assessment of reproduction toxicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity**Assessment of teratogenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**Assessment of repeated dose toxicity:**

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Assessment of repeated dose toxicity:

Causes mortality and signs of neurotoxicity through prolonged or repeated exposure.

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Acutely harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile

Toxicity to fish:

LC50 (96 h) 0.25 mg/l, Oncorhynchus mykiss

LC50 (96 h) 0.0852 mg/l, Lepomis macrochirus

LC50 (96 h) 0.43 mg/l, Cyprinus carpio

*Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-
 [(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile*

Aquatic invertebrates:

EC50 (48 h) 0.19 mg/l, Daphnia magna

LC50 (96 h) 0.00014 mg/l, Mysidopsis bahia

*Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-
 [(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile*

Aquatic plants:

EC50 (96 h) 0.068 mg/l (biomass), Scenedesmus subspicatus

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-
 [(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile*

Elimination information:

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-
 [(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile*

Bioaccumulation potential:

Bioconcentration factor: 321, Lepomis macrochirus

Accumulation in organisms is not to be expected.

Mobility in soil (and other compartments if available)

Assessment transport between environmental compartments:

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: fipronil (ISO); 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-
 [(trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile*

Assessment transport between environmental compartments:

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for	None known

user

RID

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Inland waterway transport**ADN**

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Transport in inland waterway vessel: Not evaluated

Sea transport**IMDG**

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Air transport**IATA/ICAO**

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable

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Environmental hazards:	Not applicable
Special precautions for user	None known

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

This product is classified under the Chemicals (Hazard Information and Packaging) Regulations, (CHIP) (United Kingdom).

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

To avoid risks to man and the environment, comply with the instructions for use.

Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

16. Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

T	Toxic.
N	Dangerous for the environment.
23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed.
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Acute Tox.	Acute toxicity
STOT RE	Specific target organ toxicity — repeated exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H311	Toxic in contact with skin.
H330	Fatal if inhaled.

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H301	Toxic if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H372	Causes damage to organs (central nervous system) through prolonged or repeated exposure.

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: Produktinformation-Pflanzenschutz@basf.com

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.