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

1.1. Product identifier

FENDONA 6 SC

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

Relevant identified uses: biocide

1.3. Details of the supplier of the safety data sheet

Company: BASF SE
67056 Ludwigshafen
GERMANY

Contact address: BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222
E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

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

Aquatic Acute 1
Aquatic Chronic 1

According to Directive 67/548/EEC or 1999/45/EC
Possible Hazards:
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause paraesthesia.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Signal Word:
Warning

Hazard Statement:
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):
P262 Do not get in eyes, on skin, or on clothing.

Precautionary Statements (Response):
P391 Collect spillage.

Precautionary Statements (Disposal):
P501.1 Dispose of contents/container in accordance with local regulations.

Labeling of special preparations (GHS):
May cause paraesthesia. ALPHA-CYPERMETHRIN

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

Classification/labelling in accordance with UK regulations.

Hazard symbol(s)
N Dangerous for the environment.

R-phrase(s)
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)
The product contains: ALPHA-CYPERMETHRIN
May cause paraesthesia.

2.3. 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.

SECTION 3: Composition/Information on Ingredients

3.1. Substances
Not applicable

3.2. Mixtures
Chemical nature

suspension concentrate (SC)
Biocidal product

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008
SECTION 4: First-Aid Measures

4.1. Description of first aid measures
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.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: numbness and tingling of hands and feet, lung oedema, convulsions

4.3. Indication of any immediate medical attention and special treatment needed
Treatment: Symptomatic treatment (decontamination, vital functions).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media
Suitable extinguishing media:
water spray, foam, dry powder, carbon dioxide

5.2. Special hazards arising from the substance or mixture
carbon monoxide, Carbon dioxide, hydrogen cyanide; hydrocyanic acid, hydrogen chloride, nitrogen oxides, organochloric compounds
The substances/groups of substances mentioned can be released in case of fire.

5.3. 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. Keep containers cool by spraying with water if exposed to fire. 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.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

6.2. Environmental precautions
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.

6.3. 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.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

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

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

7.2. 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.

Storage stability:
Storage duration: 36 Months

Protect from temperatures below: -10 °C
Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

7.3. 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.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters
Components with occupational exposure limits

57-55-6: Propane-1,2-diol
   TWA value 10 mg/m3 (WEL/EH 40 (UK)), Particulate
   TWA value 474 mg/m3 ; 150 ppm (WEL/EH 40 (UK)), Total vapour and particulates

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.

8.2. Exposure controls

Personal protective equipment

Respiratory protection:
   Suitable respiratory protection for higher concentrations or long-term effect: (Particle filter EN 143 P2 or FFP2)

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. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>suspension</td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>faintly aromatic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined due to potential health hazard by inhalation.</td>
</tr>
</tbody>
</table>
pH value: approx. 6 - 8
(water, 1 %%(m), 20 °C)
(measured with the undiluted substance)

crystallization temperature: -5.7 °C

Boiling point: approx. 100 °C
Information applies to the solvent.

Flash point: > 100 °C
(DIN EN 22719; ISO 2719)
No flash point - Measurement made up to the boiling point.

Evaporation rate: not applicable

Flammability: Based on the structure or composition there is no indication of flammability

Lower explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.

Upper explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.

Ignition temperature: 425 °C
(Directive 92/69/EEC, A.15)

Vapour pressure: approx. 23 hPa
(20 °C)
Information applies to the solvent.

Density: approx. 1.03 g/cm³
(20 °C)
(OECD Guideline 109)

Relative vapour density (air): not determined

Solubility in water: dispersible

Partitioning coefficient n-octanol/water (log Kow): not applicable

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic: 28 mPa.s
(20 °C)
(OECD 114)

Explosion hazard: not explosive
(Directive 92/69/EEC, A.14)

Fire promoting properties: not fire-propagating

9.2. Other information

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.
SECTION 10: Stability and Reactivity

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

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

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

10.4. Conditions to avoid
See MSDS section 7 - Handling and storage.

10.5. Incompatible materials
Substances to avoid:
strong bases, strong acids, strong oxidizing agents

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

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity
Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg (Guideline 92/69/EEC, B.1)

LC50 rat (by inhalation): > 2.08 mg/l 4 h (OECD Guideline 403)
Highest concentration available for testing. No mortality was observed. An aerosol was tested.

LD50 rat (dermal): > 2,000 mg/kg (Directive 92/69/EEC, B.3)
No mortality was observed.

Irritation
Assessment of irritating effects:
Not irritating to the eyes. Not irritating to the skin.
Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:
modified Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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.
SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Information on:** \(\text{\textalpha} \)-cypermethrin (ISO); racemate comprising (R)-\(\text{\textalpha} \)-cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-\(\text{\textalpha} \)-cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

**Toxicity to fish:**
\[ \text{LC50 (96 h) 0.00093 mg/l, Pimephales promelas (OPP 72-1 (EPA-Guideline), Flow through.)} \]

**Information on:** \(\text{\textalpha} \)-cypermethrin (ISO); racemate comprising (R)-\(\text{\textalpha} \)-cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-\(\text{\textalpha} \)-cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

**Aquatic invertebrates:**
\[ \text{EC50 (48 h) 0.000013 mg/l 12.6 ng/L, Chironomus riparius (OECD Guideline 202, part 1, static)} \]

**Aquatic plants:**
\[ \text{EC50 (72 h) > 1 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)} \]

No observed effect concentration (7 d) >= 1.39 \(\mu\)g/L (growth rate), Lemna gibba (OECD guideline 221, static)

12.2. 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.
12.3. 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: \( \alpha \)-cypermethrin (ISO); racemate comprising (R)-\( \alpha \)-cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-\( \alpha \)-cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Bioaccumulation potential:
Bioconcentration factor: 155 - 910 (73 d), Cyprinus carpio (OECD Guideline 305 C)
Accumulation in organisms is not to be expected.

12.4. Mobility in soil

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: \( \alpha \)-cypermethrin (ISO); racemate comprising (R)-\( \alpha \)-cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-\( \alpha \)-cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

12.5. 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.

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.
SECTION 13: Disposal Considerations

13.1. 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)

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

SECTION 14: Transport Information

Land transport

<table>
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<tbody>
<tr>
<td>UN number</td>
</tr>
<tr>
<td>UN proper shipping name:</td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
</tr>
<tr>
<td>Packing group:</td>
</tr>
<tr>
<td>Environmental hazards:</td>
</tr>
<tr>
<td>Special precautions for user:</td>
</tr>
</tbody>
</table>

 RID

| UN number    | UN3082         |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ALPHA-CYPERMETHRIN) |
| Transport hazard class(es): | 9, EHSM |
| Packing group: | III |
| Environmental hazards: | yes |
| Special precautions for user: | None known |

Inland waterway transport

<table>
<thead>
<tr>
<th>ADN</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
</tr>
<tr>
<td>UN proper shipping name:</td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
</tr>
</tbody>
</table>
**Packing group:** III
**Environmental hazards:** yes
**Special precautions for user:** None known
**Transport in inland waterway vessel:** Not evaluated

### Sea transport

**IMDG**

| UN number: | UN 3082 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ALPHA-CYPERMETHRIN) |
| Transport hazard class(es): | 9, EHSM |
| Packing group: | III |
| Environmental hazards: | yes |
| Marine pollutant: | YES |
| Special precautions for user: | None known |

### Air transport

**IATA/ICAO**

| UN number: | UN 3082 |
| UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ALPHA-CYPERMETHRIN) |
| Transport hazard class(es): | 9, EHSM |
| Packing group: | III |
| Environmental hazards: | yes |
| Special precautions for user: | None known |

#### 14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

#### 14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

#### 14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

#### 14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.
14.5. Environmental hazards
See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

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

<table>
<thead>
<tr>
<th>Regulation</th>
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</tr>
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<tbody>
<tr>
<td>Shipment approved</td>
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</tr>
<tr>
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<tr>
<td>Pollution category</td>
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</tr>
<tr>
<td>Ship Type</td>
<td>Not evaluated</td>
</tr>
</tbody>
</table>

**Further information**
This product is subject to the most recent edition of "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations" and their amendments (United Kingdom).

**SECTION 15: Regulatory Information**

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

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

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).

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

This product may be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments if specific threshold tonnages are exceeded (United Kingdom).

15.2. Chemical Safety Assessment

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

**SECTION 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.

### 20
- Harmful by inhalation.

### 25
- Toxic if swallowed.

### 37/38
- Irritating to respiratory system and skin.

### 48/22
- Harmful: 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.

**Aquatic Acute**
- Hazardous to the aquatic environment - acute

**Aquatic Chronic**
- Hazardous to the aquatic environment - chronic

**Acute Tox.**
- Acute toxicity

**STOT SE**
- Specific target organ toxicity — single exposure

**STOT RE**
- Specific target organ toxicity — repeated exposure

| H301 | Toxic if swallowed.          |
| H332 | Harmful if inhaled.          |
| H35 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life.  |
| H410 | Very toxic to aquatic life with long lasting effects. |

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: product-safety-north@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.