1. Identification

Product identifier

**Stedfast® SC**

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

Relevant identified uses: crop protection product, insecticide

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
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

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (oral)
Aquatic Acute 1
Aquatic Chronic 1
Label elements

Globally Harmonized System (GHS)

Pictogram:

![Pictogram Image]

Signal Word:
Warning

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

Precautionary Statement:
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

Precautionary Statements (Prevention):
P264 Wash contaminated body parts thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Precautionary Statements (Response):
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P391 Collect spillage.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Labeling of special preparations (GHS):
May cause paraesthesia. α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxy late; (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
May produce an allergic reaction. Contains: 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one

According to UN GHS criteria
3. Composition/Information on Ingredients

**Substances**

Not applicable

**Mixtures**

**Chemical nature**

crop protection product, insecticide, suspension concentrate (SC)

**Hazardous ingredients (GHS)**

According to UN GHS criteria

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Content (W/W)</th>
<th>Acute Tox. 4 (Inhalation - dust)</th>
<th>Acute Tox. 3 (oral)</th>
<th>Skin Corr./Irrit. 3</th>
<th>STOT SE 3 (irr. to respiratory syst.)</th>
<th>STOT RE 2</th>
<th>Aquatic Acute 1</th>
<th>Aquatic Chronic 1</th>
<th>M-factor acute: 10000</th>
<th>M-factor chronic: 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate</td>
<td>9.85 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil -- unspecified</td>
<td>&lt; 15 %</td>
<td>Asp. Tox. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other hazards**

According to UN GHS criteria

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.
4. First-Aid Measures

**Description of first aid measures**

Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

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:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

**Indication of any immediate medical attention and special treatment needed**

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

### 5. Fire-Fighting Measures

**Extinguishing media**

Suitable extinguishing media:
- water spray, carbon dioxide, foam, dry powder

**Special hazards arising from the substance or mixture**

- carbon monoxide, hydrogen chloride, Carbon dioxide, nitrogen 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. 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.

### 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**

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

**Environmental precautions**

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

**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.
7. Handling and Storage

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.

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: -5 °C
The product can crystallize below the limit temperature.
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.

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

| 57-55-6: Propane-1,2-diol |
| 67375-30-8: α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate |
| 64742-54-7: Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil -- unspecified |

Exposure controls

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).
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) etc.

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
The statements on personal protective equipment in the instructions for use apply when handling
crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended.
Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

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>aliphatic</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>Not determined due to potential health hazard by inhalation.</td>
</tr>
<tr>
<td>pH value</td>
<td>approx. 5 - 7</td>
</tr>
<tr>
<td></td>
<td>(1 g/l, 20 °C)</td>
</tr>
<tr>
<td>Crystallization temperature:</td>
<td>-5.3 °C</td>
</tr>
<tr>
<td>Boiling range:</td>
<td>approx. 100 °C</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability:</td>
<td>not highly flammable</td>
</tr>
<tr>
<td>Lower explosion limit:</td>
<td>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.</td>
</tr>
</tbody>
</table>
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: 394 °C

Vapour pressure: approx. 23 hPa
(20 °C)

Information applies to the solvent.

Density: approx. 1.02 g/cm³
(20 °C)

Relative vapour density (air): not applicable

Solubility in water: dispersible

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

Thermal decomposition: 95 °C, 20 kJ/kg (DSC (OECD 113))
195 °C, 50 kJ/kg (DSC (OECD 113))
295 °C, 350 kJ/kg (DSC (OECD 113))

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

Viscosity, dynamic: 125 mPa·s
(20 °C, 100 1/s)

Viscosity, kinematic: 55.9 mm²/s
(40 °C)

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

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:
Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
LD50 rat (oral): 1.768 mg/kg (OECD Guideline 401)
LC50 rat (by inhalation): > 4.6 mg/l 4 h (OECD Guideline 403)
Highest concentration available for testing. No mortality was observed.
LD50 rat (dermal): > 5.000 mg/kg (OECD Guideline 402)

Irritation

Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)
Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
modified Buehler 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.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

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:* α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxy late; (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Assessment of repeated dose toxicity:
Repeated oral exposure may affect certain organs. Damages the peripheral nerve system.

Information on: Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil -- unspecified
Assessment of repeated dose toxicity:
The substance may cause damage to the lung after repeated inhalation of high doses. Repeated dermal uptake of the substance did not cause substance-related effects.

Aspiration hazard
No aspiration hazard expected.
The product has not been tested. The statement has been derived from the properties of the individual components.

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Very toxic to aquatic life with long lasting effects.

Toxicity to fish:
LC50 (96 h) 0,162 mg/l, Oncorhynchus mykiss (static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates:
LC50 (48 h) 0,0009 mg/l, Daphnia magna (OECD Guideline 202, part 1)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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

Information on: α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-α-cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Aquatic plants:
EC50 (72 h) > 0,027 mg/l (growth rate), Anabaena flos-aquae (OECD Guideline 201)

EC50 (7 d) > 0,00139 mg/l (growth rate), Lemna gibba

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: α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Assessment biodegradation and elimination (H2O):
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: α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-α-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)

Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: α-cypermethrin (ISO); racemate comprising (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Assessment transport between environmental compartments:
Adsorption in soil: 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 the Montreal Protocol 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
14. Transport Information

**Land transport**

**ADR**
- 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

**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**

**ADN**
- 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

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

Transport in bulk according to Annex II of MARPOL 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

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

16. Other Information
Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

- **Acute Tox.**: Acute toxicity
- **Aquatic Acute**: Hazardous to the aquatic environment - acute
- **Aquatic Chronic**: Hazardous to the aquatic environment - chronic
- **Skin Corr./Irrit.**: Skin corrosion/irritation
- **STOT SE**: Specific target organ toxicity — single exposure
- **STOT RE**: Specific target organ toxicity — repeated exposure
- **Asp. Tox.**: Aspiration hazard
- **Eye Dam./Irrit.**: Serious eye damage/eye irritation
- **Skin Sens.**: Skin sensitzation
- **H316**: Causes mild skin irritation.
- **H332**: Harmful if inhaled.
- **H301**: Toxic if swallowed.
- **H373**: May cause damage to organs through prolonged or repeated exposure.
- **H335**: May cause respiratory irritation.
- **H400**: Very toxic to aquatic life.
- **H410**: Very toxic to aquatic life with long lasting effects.
- **H304**: May be fatal if swallowed and enters airways.
- **H318**: Causes serious eye damage.
- **H302**: Harmful if swallowed.
- **H401**: Toxic to aquatic life.
- **H411**: Toxic to aquatic life with long lasting effects.
- **H315**: Causes skin irritation.
- **H317**: May cause an allergic skin reaction.

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. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. 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.