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

Product identifier

CABRIO

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

Relevant identified uses: crop protection product, fungicide

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

Label elements

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

EEC Directives

Hazard symbol(s)
Xn Harmful.
N Dangerous for the environment.

R-phrase(s)
R40 Limited evidence of a carcinogenic effect.
R20/22 Harmful by inhalation and if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)
S2 Keep out of the reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S20/21 When using do not eat, drink or smoke.
S29/35 Do not empty into drains, this material and its container must be disposed of in a safe way.
S36/37 Wear suitable protective clothing and gloves.
S46 If swallowed, seek medical advice immediately and show this container or label.
S57 Use appropriate container to avoid environmental contamination.

Hazard determining component(s) for labelling: PYRACLOSTROBIN, solvent naphtha, NAPHTHALENE, 2-ETHYLHEXAN-1-OL

Classification of the substance or mixture

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

Carc. Cat. 3

Possible Hazards:
Limited evidence of a carcinogenic effect.
Harmful by inhalation and if swallowed.
Irritating to eyes, respiratory system and skin.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

crop protection product, fungicide, Emulsifiable concentrate (EC)

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

pyraclostrobin (ISO); methyl N-\{2-\[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl\]phenyl\}(N-methoxy)carbamate

| Ingredient | Content (W/W) | CAS Number | INDEX-Number | Acute Tox. | Skin Corr. | STOT SE | Aquatic Acute | M-factor acute | M-factor chronic | Aquatic Chronic | Carc. |
|------------|---------------|------------|--------------|-------------|------------|---------|---------------|----------------|----------------|----------------|-------|-------|
| pyraclostrobin | 23.8 %        | 175013-18-0 | 613-272-00-6 | 3          | 2          | 3       | 1             | 100             | 10             | 1              | 2     | 2     |

solvent naphtha

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Content (W/W)</th>
<th>CAS Number</th>
<th>REACH registration number</th>
<th>Acute Tox.</th>
<th>Carc.</th>
<th>Aquatic Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>naphthalene</td>
<td>&lt; 75 %</td>
<td>64742-94-5</td>
<td>01-2119451151-53</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2-Ethylhexan-1-ol</td>
<td>&lt; 5 %</td>
<td>104-76-7</td>
<td>01-2119487289-20</td>
<td>4 (oral)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients
according to Directive 1999/45/EC
pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxy methyl]phenyl}(N-methoxy)carbamate

Content (W/W): 23.8 %
CAS Number: 175013-18-0
INDEX-Number: 613-272-00-6
Hazard symbol(s): T, N
R-phrase(s): 23, 37/38, 50/53

solvent naphtha

Content (W/W): < 75 %
CAS Number: 64742-94-5
REACH registration number: 01-2119451151-53
Hazard symbol(s): N, Xn
R-phrase(s): 40, 65, 66, 51/53
Carc. Cat. 3

naphthalene

Content (W/W): < 15 %
CAS Number: 91-20-3
EC-Number: 202-049-5
INDEX-Number: 601-052-00-2
Hazard symbol(s): Xn, N
R-phrase(s): 22, 40, 50/53
Carc. Cat. 3

2-Ethylhexan-1-ol

Content (W/W): < 5 %
CAS Number: 104-76-7
EC-Number: 203-234-3
REACH registration number: 01-2119487289-20
Hazard symbol(s): Xn
R-phrase(s): 20, 36/37/38

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
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

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

On skin contact:
Immediately wash thoroughly with soap and water, seek medical attention.
On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

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, foam, dry powder, carbon dioxide

**Special hazards arising from the substance or mixture**
carbon monoxide, hydrogen chloride, Carbon dioxide, 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**
Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Do not breathe vapour/spray.

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

**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.
Cleaning operations should be carried out only while wearing breathing apparatus. 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
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:
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.

Storage stability:
Storage duration: 36 Months

Protect from temperatures below: 0 °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
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) 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
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

Form: liquid
Colour: dark yellow
Odour: faintly aromatic, moderate odour, of the solvent contained in the product
Odour threshold: Not determined since harmful by inhalation.

pH value: approx. 5 - 7
(CIPAC standard water D, 1 %(m), 20 °C)
solidification temperature: approx. -17 °C
onset of boiling: approx. 180 °C
Information applies to the solvent.
Flash point: 98 °C (DIN EN 22719; ISO 2719)
Evaporation rate: not applicable
Flammability: Product is combustible.
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.
Vapour pressure: approx. 0.053 hPa (20 °C)
Information applies to the solvent.
Density: approx. 1.06 g/cm³ (20 °C)
Relative vapour density (air): not determined
Solubility in water: emulsifiable
Partitioning coefficient n-octanol/water (log Kow): not applicable
Thermal decomposition: not determined
Viscosity, dynamic: 8.8 mPa.s (40 °C)
Viscosity, kinematic: 8.5 mm²/s (40 °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 acids, strong bases, 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 high toxicity after single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Experimental/calculated data:
LD50 rat (oral): 260 mg/kg (OECD Guideline 401)
LC50 rat (by inhalation): 3.27 mg/l 4 h (OECD Guideline 403)
An aerosol was tested.
LD50 rat (dermal): > 4,000 mg/kg (OECD Guideline 402)
No mortality was observed.

Irritation
Assessment of irritating effects:
Skin contact causes irritation. Eye contact causes irritation.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)
Serious eye damage/irritation rabbit: Irritant. (OECD Guideline 405)

Respiratory/Skin sensitization
Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
Buehler test guinea pig: Non-sensitizing. (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.

Information on: naphthalene
Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was mutagenic in a mammalian cell culture test system. The substance was not mutagenic in a test with mammals. Literature data.

Carcinogenicity

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

Information on: solvent naphtha
Assessment of carcinogenicity:
Long-term exposure to highly irritating concentrations resulted in skin tumors in animals. A carcinogenic effect in humans can be excluded after brief skin contact.

Information on: Naphthalene
Assessment of carcinogenicity:
Indication of possible carcinogenic effect in animal tests.

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:
Causes temporary irritation of the respiratory tract.
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: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate
Assessment of repeated dose toxicity:
After repeated exposure the prominent effect is local irritation. The substance may cause damage to the olfactory epithelium after repeated inhalation.

Information on: 2-Ethylhexan-1-ol
Assessment of repeated dose toxicity:
Repeated exposure to high doses of the substance causes reversible liver changes in rodents. According to present knowledge, these effects do not occur in man.

Aspiration hazard
No aspiration hazard expected.

Other relevant toxicity information
Misuse can be harmful to health.

12. Ecological Information
Toxicity

Assessment of aquatic toxicity:
Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Toxicity to fish:
LC50 (96 h) 0.017 mg/l, Oncorhynchus mykiss (OECD Guideline 203)
LC50 (96 h) > 0.058 - < 0.1 mg/l, Oryzias latipes

Aquatic invertebrates:
EC50 (48 h) 0.0649 mg/l, Daphnia magna (OECD Guideline 202, part 1)

Aquatic plants:
EC50 (72 h) 3.32 mg/l, Pseudokirchneriella subcapitata (OECD Guideline 201)

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: pyraclostrobin (ISO); methyl N-[2-{1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl}phenyl](N-methoxy)carbamate*

Assessment biodegradation and elimination (H2O):
*Not readily biodegradable (by OECD criteria).*

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**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: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate*

Bioaccumulation potential:
*Bioconcentration factor: 379 - 507, Oncorhynchus mykiss (OECD-Guideline 305)*
Accumulation in organisms is not to be expected.

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**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: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate*

Assessment transport between environmental compartments:
*Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.*

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**Results of PBT and vPvB assessment**

The product does not contain a substance fullfilling 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.

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
UN number: UN2902
UN proper shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S. (contains SOLVENT NAPHTHA, PYRACLOSTROBIN 23%)
Transport hazard class(es): 6.1, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: Tunnel code: E

RID
UN number: UN2902
UN proper shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S. (contains SOLVENT NAPHTHA, PYRACLOSTROBIN 23%)
Transport hazard class(es): 6.1, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Inland waterway transport

ADN
UN number: UN2902
UN proper shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S. (contains SOLVENT NAPHTHA, PYRACLOSTROBIN 23%)
Transport hazard class(es): 6.1, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known
Transport in inland: Not evaluated
waterway vessel:

**Sea transport**

IMDG

- **UN number:** UN 2902
- **UN proper shipping name:** PESTICIDE, LIQUID, TOXIC, N.O.S. (contains SOLVENT NAPHTHA, PYRACLOSTROBIN 23%)
- **Transport hazard class(es):** 6.1, EHSM
- **Packing group:** III
- **Environmental hazards:** yes
  Marine pollutant: YES
- **Special precautions for user:** None known

**Air transport**

IATA/ICAO

- **UN number:** UN 2902
- **UN proper shipping name:** PESTICIDE, LIQUID, TOXIC, N.O.S. (contains SOLVENT NAPHTHA, PYRACLOSTROBIN 23%)
- **Transport hazard class(es):** 6.1
- **Packing group:** III
- **Environmental hazards:** No Mark as dangerous for the environment is needed
- **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**

For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)

**Chemical Safety Assessment**
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.
Xn Harmful.
23 Toxic by inhalation.
37/38 Irritating to respiratory system and skin.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
40 Limited evidence of a carcinogenic effect.
65 Also harmful: may cause lung damage if swallowed.
66 Repeated exposure may cause skin dryness or cracking.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
22 Harmful if swallowed.
20 Harmful by inhalation.
36/37/38 Irritating to eyes, respiratory system and skin.
Acute Tox. Acute toxicity
Skin Corr./Irrit. Skin corrosion/irritation
STOT SE Specific target organ toxicity — single exposure
Aquatic Acute Hazardous to the aquatic environment - acute
Aquatic Chronic Hazardous to the aquatic environment - chronic
Asp. Tox. Aspiration hazard
Carc. Carcinogenicity
Eye Dam./Irrit. Serious eye damage/eye irritation
Carc. Cat. 3 Carcinogenic substances Category 3: Substances which cause concern for man owing to possible carcinogenic effects.
H315 Causes skin irritation.
H331 Toxic if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H335 May cause respiratory irritation.
H304 May be fatal if swallowed and enters airways.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful by inhalation.

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.