1. Identification

Product identifier used on the label

Stamina F3 Cereals Fungicide Seed Treatment

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, fungicide
Recommended use*: fungicide

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 672814
EPA Registration number: 7969-322
Synonyms: Pyraclostrobin + Triticonazole + Metalaxyl

2. Hazards Identification


Classification of the product

<table>
<thead>
<tr>
<th>Skin Sens.</th>
<th>Aquatic Acute</th>
<th>Aquatic Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Skin sensitization
Hazardous to the aquatic environment - acute
Hazardous to the aquatic environment - chronic

Label elements
Pictogram:

Signal Word:
Warning

Hazard Statement:
H317 May cause an allergic skin reaction.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):
P280 Wear protective gloves.
P273 Avoid release to the environment.
P262 Do not get in eyes, on skin, or on clothing.
P272 Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P362 + P364 Take off contaminated clothing and wash it before reuse.

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

No data available.

3. Composition / Information on Ingredients


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>57837-19-1</td>
<td>0.93 %</td>
<td>metalaxyl</td>
</tr>
<tr>
<td>175013-18-0</td>
<td>1.59 %</td>
<td>Pyraclostrobin</td>
</tr>
<tr>
<td>131983-72-7</td>
<td>1.59 %</td>
<td>Triticonazole</td>
</tr>
<tr>
<td>56-81-5</td>
<td>10.0 - 15.0%</td>
<td>glycerol</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.
If on skin:
Wash thoroughly with soap and water.

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

If swallowed:
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) symptoms and/or effects are not known so far

Indication of any immediate medical attention and special treatment needed

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

5. Fire-Fighting Measures

Extinguishing media

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

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
carbon monoxide, carbon dioxide, nitrogen oxides, chlorine compounds, sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters
Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Keep containers cool by spraying with water if exposed to fire. 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.

6. Accidental release measures

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

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.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>OSHA PEL</th>
<th>PEL 15 mg/m3 Total dust ; PEL 5 mg/m3 Respirable fraction ; TWA value 10 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ;</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Advice on system design:
Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.
**Hand protection:**
Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

**Eye protection:**
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

**Body protection:**
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

**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. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Remove contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

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**9. Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>suspension</td>
</tr>
<tr>
<td>Odour</td>
<td>faint odour, sweetish</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined due to potential health hazard by inhalation.</td>
</tr>
<tr>
<td>Colour</td>
<td>red</td>
</tr>
<tr>
<td>pH value</td>
<td>approx. 6 - 8 (20 °C)</td>
</tr>
<tr>
<td></td>
<td>The product has not been tested.</td>
</tr>
<tr>
<td></td>
<td>The statement has been derived from substances/products of a similar structure or composition.</td>
</tr>
<tr>
<td>Melting point</td>
<td>The product has not been tested.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>approx. 100 °C</td>
</tr>
<tr>
<td></td>
<td>The product has not been tested.</td>
</tr>
<tr>
<td></td>
<td>The statement has been derived from substances/products of a similar structure or composition.</td>
</tr>
<tr>
<td>Flash point</td>
<td>The product has not been tested.</td>
</tr>
<tr>
<td></td>
<td>The statement has been derived from substances/products of a similar structure or composition. No flash point - Measurement made up to the boiling point.</td>
</tr>
<tr>
<td>Flammability</td>
<td>not applicable</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>
<tr>
<td>Upper 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>
Autoignition: 409 °C
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Vapour pressure: approx. 23.4 hPa
(20 °C)
Information applies to the solvent.

Density: approx. 1.07 g/cm³
(20 °C)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Viscosity, dynamic: approx. 26 mPa.s
(20 °C)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Solubility in water: dispersible
Evaporation rate: not applicable
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.

Oxidizing properties:
not fire-propagating

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
strong acids, strong bases, strong oxidizing agents

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

Thermal decomposition:
190 °C, 2.5 K/min (DSC (DIN 51007))
(onset temperature)
325 °C, 2.5 K/min (DSC (DIN 51007))
(onset temperature)
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

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

Oral
Type of value: LD50
Species: rat (female)
Value: > 2,000 mg/kg

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: > 5.82 mg/l

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg

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

Skin
Species: rabbit
Result: non-irritant

Eye
Species: rabbit
Result: non-irritant

Sensitization
Assessment of sensitization: Sensitization after skin contact possible. The product has not been tested. The statement has been derived from the properties of the individual components.
Information on: 1,2-benzenothiazol-3(2H)-one
Geinea pig maximization test
Species: guinea pig
Result: Caused skin sensitization in animal studies.
Method: OECD Guideline 406
Literature data.

Chronic Toxicity/Effects

Repeated dose toxicity
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
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.

Genetic toxicity
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.

Teratogenicity
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.

Other Information
Misuse can be harmful to health.

Symptoms of Exposure

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

12. Ecological Information

Toxicity

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

Toxicity to fish

*Information on: Pyraclostrobin*
LC50 (96 h) 0.00616 mg/l, Oncorhynchus mykiss (EPA 72-1, Flow through.)

*Information on: Triticonazole*
LC50 (96 h) > 3.6 mg/l, Oncorhynchus mykiss

*Information on: metalaxyl*
LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss
LC50 (96 h) > 100 mg/l, Cyprinus carpio

Aquatic invertebrates

*Information on: Pyraclostrobin*
EC50 (48 h) 0.0157 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

*Information on: Triticonazole*
EC50 (96 h) 1.7 mg/l, Mysidopsis bahia

*Information on: metalaxyl*
LC50 29 mg/l, Daphnia magna

Aquatic plants

*Information on: Pyraclostrobin*
EC50 (96 h) > 0.843 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)

*Information on: Triticonazole*
EC50 (120 h) 0.31 mg/l, Skeletonema costatum
No observed effect concentration (120 h) 0.031 mg/l, Skeletonema costatum
EC50 (96 h) 1 mg/l, Selenastrum capricornutum
EC50 (14 d) 1.4 mg/l, Lemma gibba
No observed effect concentration (14 d) 0.33 mg/l, Lemna gibba

*Information on: metalaxyl*
EC50 1 mg/l 140 ppm, Selenastrum sp.
EC50 92 ppm, Lemma minor

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.

Assessment biodegradation and elimination (H2O)

*Information on: Pyraclostrobin*
Not readily biodegradable (by OECD criteria).

*Information on: Triticonazole*
Not readily biodegradable (by OECD criteria).

Information on: metalaxyl

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.

Assessment bioaccumulation potential

Information on: Pyraclostrobin

Accumulation in organisms is not to be expected.

Information on: Triticonazole

Accumulation in organisms is not to be expected.

Information on: metalaxyl

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

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: pyraclostrobin

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

Information on: Triticonazole

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

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

13. Disposal considerations

Waste disposal of substance:
Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions,
contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container disposal:**
Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

### 14. Transport Information

#### Land transport

US DOT
Not classified as a dangerous good under transport regulations

#### Sea transport

IMDG
| Hazard class: | 9 |
| Packing group: | III |
| ID number: | UN 3082 |
| Hazard label: | 9, EHSM |
| Marine pollutant: | YES |
| Proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains TRITICONAZOLE, PYRACLOSTROBIN) |

#### Air transport

IATA/ICAO
| Hazard class: | 9 |
| Packing group: | III |
| ID number: | UN 3082 |
| Hazard label: | 9, EHSM |
| Proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains TRITICONAZOLE, PYRACLOSTROBIN) |

### 15. Regulatory Information

**Federal Regulations**

**Registration status:**
Crop Protection | TSCA, US | released / exempt
Chemical | TSCA, US | blocked / not listed

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

**Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:**

**WARNING:** This product can expose you to chemicals including DIMETHYL SULFATE, which is known to the State of California to cause cancer, and METHANOL, which is known to the State of
California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Labeling requirements under FIFRA

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:
HARMFUL IF SWALLOWED.
Causes eye irritation.
Avoid contact with the skin, eyes and clothing.

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2018/12/05

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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