SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: PROSPER® FX
MSDS Number: 102000017240
EPA Registration No.: 264-1034

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothianidin</td>
<td>210850-92-5</td>
<td>21.75</td>
</tr>
<tr>
<td>Carboxin</td>
<td>5234-68-4</td>
<td>3.81</td>
</tr>
<tr>
<td>Trifloxystrobin</td>
<td>141517-21-7</td>
<td>0.544</td>
</tr>
<tr>
<td>Metalaxyl</td>
<td>57837-19-1</td>
<td>0.408</td>
</tr>
<tr>
<td>1,2-Propanediol</td>
<td>57-55-6</td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview
Caution! Hazard to humans and domestic animals. Keep out of the reach of children. Causes eye irritation. Avoid contact with skin, eyes and clothing.

Physical State
liquid opaque

Appearance
blue

Routes of Exposure
Ingestion, Skin Absorption, Inhalation, Eye contact

Immediate Effects
Eye
Causes eye irritation. Do not get in eyes.

Skin
May cause slight irritation. Avoid contact with skin and clothing.

Ingestion
May cause nausea, vomiting, abdominal pain. Do not take internally.

Inhalation
May cause irritation. Avoid contact or inhalation of spray mist.
### Chronic or Delayed Long-Term
This product or its components may have target organ effects.

### Potential Environmental Effect
Toxic to fish and aquatic invertebrates.

## SECTION 4. FIRST AID MEASURES

### General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

### Eye
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

### Skin
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

### Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

### Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

### Notes to Physician Treatment
There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

## SECTION 5. FIRE FIGHTING MEASURES

### Flash point
> 100 °C / 212 °F
No flash point - Determination conducted up to the boiling point.

### Suitable Extinguishing Media
Water spray, Foam, Carbon dioxide (CO2), Dry chemical

### Fire Fighting Instructions
Fight fire from upwind position. Keep out of smoke. Cool closed containers/tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
**SECTION 6. ACCIDENTAL RELEASE MEASURES**

<table>
<thead>
<tr>
<th>Personal Precautions</th>
<th>Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods for Cleaning Up</td>
<td>Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.</td>
</tr>
<tr>
<td>Additional Advice</td>
<td>Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.</td>
</tr>
</tbody>
</table>

**SECTION 7. HANDLING AND STORAGE**

<table>
<thead>
<tr>
<th>Handling Procedures</th>
<th>Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storing Procedures</td>
<td>Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight. Protect from freezing.</td>
</tr>
<tr>
<td>Work/Hygienic Procedures</td>
<td>Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.</td>
</tr>
<tr>
<td>Min/Max Storage Temperatures</td>
<td>Protect from freezing.</td>
</tr>
</tbody>
</table>

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<table>
<thead>
<tr>
<th>General Protection</th>
<th>Follow all label instructions. Train employees in safe use of the product.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.</td>
</tr>
<tr>
<td>Eye/Face Protection</td>
<td>Tightly fitting safety goggles</td>
</tr>
<tr>
<td>Hand Protection</td>
<td>Chemical resistant nitrile rubber gloves</td>
</tr>
</tbody>
</table>
Body Protection
Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection
When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>OES BCS*</th>
<th>Limit (mg/m³)</th>
<th>Form of Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothianidin</td>
<td>210880-92-5</td>
<td>OES BCS*</td>
<td>2.8</td>
<td>Aerosol.</td>
</tr>
<tr>
<td>Trifloxystrobin</td>
<td>141517-21-7</td>
<td>OES BCS*</td>
<td>2.7</td>
<td>Vapor.</td>
</tr>
<tr>
<td>Metalaxyl</td>
<td>57837-19-1</td>
<td>TX ESL</td>
<td>50</td>
<td>Particulate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>5</td>
<td>Respirable.</td>
</tr>
<tr>
<td>1,2-Propanediol</td>
<td>57-55-6</td>
<td>WEEL</td>
<td>10</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>20</td>
<td>Particulate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>500 ppm</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>2 ug/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>1560 ug/m³</td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>ACGIH</td>
<td>10</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z1</td>
<td>15</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z1A</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>50 ug/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>5 ug/m³</td>
<td></td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>blue</td>
</tr>
<tr>
<td>Physical State</td>
<td>liquid opaque</td>
</tr>
<tr>
<td>pH</td>
<td>7.0 - 9.0 (100 %)</td>
</tr>
<tr>
<td>Density</td>
<td>approx. 1.30 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>-15 - -14 °C / 5 - 7 °F</td>
</tr>
<tr>
<td>Viscosity</td>
<td>400 - 600 mPa.s</td>
</tr>
</tbody>
</table>
SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid

Extremes of temperature and direct sunlight.
Freezing

Incompatibility

Strong oxidizing agents

Hazardous Decomposition Products

Thermal decomposition can lead to release of:
Carbon dioxide (CO2)
Carbon monoxide
Sulphur oxides

Hazardous Reactions

Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredients, clothianidin, carboxin, metalaxyl, and trifloxystrobin.

**Acute Oral Toxicity**

female rat: LD50: > 5,000 mg/kg

**Acute Dermal Toxicity**

male/female combined rat: LD50: > 5,000 mg/kg

**Acute Inhalation Toxicity**

male/female combined rat: LC50: > 2.5 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

male/female combined rat: LC50: > 10.0 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

**Skin Irritation**

rabbit: Slight irritation.

**Eye Irritation**

rabbit: Mild eye irritation.

**Sensitization**

guinea pig: Non-sensitizing.

**Chronic Toxicity**

Clothianidin caused effects in the liver, kidney and/or ovaries following chronic exposure to high doses in mice, rats and dogs.

Carboxin caused kidney and/or liver effects in chronic dietary studies in rats and dogs.

Trifloxystrobin caused liver effects in chronic studies in mice, rats and/or dogs.

Metalaxyl caused liver effects in chronic studies in mice, rats and/or dogs.
Assessment Carcinogenicity
Clothianidin was not carcinogenic in lifetime feeding studies in rats and mice.

Carboxin did not demonstrate any biologically significant evidence of carcinogenic potential in rats and mice. EPA has classified carboxin as “not likely to be carcinogenic to humans.”

Trifloxystrobin is not carcinogenic based on oncogenicity studies in rats and mice.

Metalaxyl was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH
Titanium dioxide 13463-67-7 Group A4

NTP
None.

IARC
Titanium dioxide 13463-67-7 Overall evaluation: 2B

OSHA
None.

Reproductive & Developmental Toxicity
REPRODUCTION:
Clothianidin is not considered a reproductive toxicant at non-maternally toxic dose levels.

Carboxin was not a primary reproductive toxicant in multi-generation studies in rats. Reproductive effects were observed only at doses producing systemic toxicity.

Trifloxystrobin is not considered a primary reproductive toxicant in rats.

Metalaxyl did not cause reproductive toxicity in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY:
Clothianidin was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rabbits but were considered secondary to maternal toxicity.

Carboxin is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Trifloxystrobin is not considered a primary developmental toxicant in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity.

Metalaxyl is not considered a primary developmental toxicant in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity.

Neurotoxicity
Clothianidin was not a neurotoxicant in acute, subchronic and developmental neurotoxicity screening studies in rats.
Carboxin neurotoxicity studies are not required at this time.

Trifloxystrobin is not a primary neurotoxicant based on an acute (oral gavage) neurotoxicity screening study in rats.

Metalaxyl neurotoxicity studies are not required at this time.

**Mutagenicity**

Clothianidin was not genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Carboxin demonstrated evidence of clastogenic potential in genotoxicity studies.

Trifloxystrobin is not considered genotoxic based on in vitro and in vivo tests.

Metalaxyl was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

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### SECTION 12. ECOLOGICAL INFORMATION

**Environmental Precautions**

Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

### SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance**

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

**Container Disposal**

Follow advice on product label and/or leaflet. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

### SECTION 14. TRANSPORT INFORMATION

**TRANSPORTATION CLASSIFICATION (UNITED STATES)**

Not Regulated For Surface Transportation

**FREIGHT CLASSIFICATION:**

Insecticides or Fungicides, N.O.I.: Other than poison

### SECTION 15. REGULATORY INFORMATION
US Federal Regulations
TSCA list
1,2-Propanediol  57-55-6
Titanium dioxide  13463-67-7
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.
SARA Title III - Section 302 - Notification and Information
None.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
Carboxin  5234-68-4  1.0%

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
Carboxin  5234-68-4  NJ
1,2-Propanediol  57-55-6  MN, RI
Titanium dioxide  13463-67-7  IL, MN, RI

Canadian Regulations
Canadian Domestic Substance List
1,2-Propanediol  57-55-6
Titanium dioxide  13463-67-7

Environmental
CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16. OTHER INFORMATION
NFPA 704 (National Fire Protection Association):
Health - 1  Flammability - 1  Reactivity - 0  Others - none
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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