SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier
Trade name PROSARO XTR
Product code (UVP) 81776849
SDS Number 102000028361
PCP Registration No. 32824

Relevant identified uses of the substance or mixture and uses advised against
Use Fungicide
Restrictions on use See product label for restrictions.

Information on supplier
Supplier Bayer CropScience Inc
#200, 160 Quarry Park Blvd, SE
Calgary, Alberta T2C 3G3
Canada

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.
Emergency Telephone Number (24hr/7 days) 1-800-334-7577
Product Information Telephone Number 1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
Serious eye damage: Category 1
Skin sensitisation: Category 1B
Skin irritation, Reproductive toxicity: Category 2
Acute toxicity(Inhalation): Category 4

Labelling in accordance with Part 3 of the Hazardous Products Regulations

Signal word: Danger
Hazard statements
Causes serious eye damage.
May cause an allergic skin reaction.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
Harmful if inhaled.

Precautionary statements
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing mist and spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor/physician.
IF ON SKIN: Wash with plenty of water/soap.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
IF exposed or concerned: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a physician or poison control center if you feel unwell.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prothioconazole</td>
<td>178928-70-6</td>
<td>12.5</td>
</tr>
<tr>
<td>Tebuconazole</td>
<td>107534-96-3</td>
<td>12.5</td>
</tr>
<tr>
<td>Mefenpyr-diethyl</td>
<td>135590-91-9</td>
<td>3.13</td>
</tr>
<tr>
<td>N,N-Dimethyl decanamide</td>
<td>14433-76-2</td>
<td>56.3</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Description of first aid measures

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

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.
Skin contact
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.

Eye contact
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.

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.

Most important symptoms and effects, both acute and delayed
Symptoms
To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed
Treatment
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media
Suitable
Water spray, Dry powder, Foam, Carbon dioxide (CO2)

Unsuitable
None known.

Special hazards arising from the substance or mixture
Dangerous gases are evolved in the event of a fire.

Advice for firefighters
Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information
Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point
151 °C

Auto-Ignition temperature
330 °C / 626 °F

Lower explosion limit
No data available

Upper explosion limit
No data available

Explosivity
Not explosive

92/69/EEC, A.14 / OECD 113
SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice
Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

Reference to other sections
Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Hygiene measures
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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers
Store in original container and out of the reach of children, preferably in a locked storage area. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prothioconazole</td>
<td>178928-70-6</td>
<td>1.4 mg/m³ (SK-ABS)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Tebuconazole</td>
<td>107534-96-3</td>
<td>0.2 mg/m³</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>
**SAFETY DATA SHEET**

**PROSARO XTR**

Version 1.0 / CDN 102000028361

Revision Date: 06/02/2017

Print Date: 01/30/2019

<table>
<thead>
<tr>
<th>Mefenpyr-diethyl</th>
<th>(SK-ABS)</th>
<th>10 mg/m³ (TWA)</th>
<th>OES BCS*</th>
</tr>
</thead>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**Exposure controls**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**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.

**Hand protection**

Chemical resistant nitrile rubber gloves

**Eye protection**

Safety glasses with side-shields

**Skin and body protection**

Wear long-sleeved shirt and long pants and shoes plus socks.

**General protective measures**

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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

Yellow to brown

**Physical State**

Liquid clear to slightly turbid

**Odor**

Aromatic

**Odour Threshold**

No data available

**pH**

3.5 - 5.5 at 1 % (23 °C) (deionized water)

**Vapor Pressure**

No data available

**Vapor Density (Air = 1)**

No data available

**Density**

1.00 g/cm³ at 20 °C

**Evaporation rate**

No data available

**Boiling Point**

No data available

**Melting / Freezing Point**

No data available

**Water solubility**

No data available

**Minimum Ignition Energy**

Not applicable

**Decomposition temperature**

No data available

**Partition coefficient: n-octanol/water**

Not applicable
Viscosity: No data available

Flash point: 151 °C

Auto-ignition temperature: 330 °C / 626 °F

Lower explosion limit: No data available

Upper explosion limit: No data available

Explosivity: Not explosive

92/69/EEC, A.14 / OECD 113

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition: No data available
Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

Conditions to avoid: No data available

Incompatible materials: No data available

Hazardous decomposition products: No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Eye contact, Skin contact, Ingestion, Inhalation

Immediate Effects
Eye: Corrosive - causes irreversible eye damage. Causes eye irritation.
Skin: Irritating to skin. Harmful if absorbed through skin.
Ingestion: Harmful if swallowed.
Inhalation: Harmful if inhaled.

Information on toxicological effects
Acute oral toxicity: LD50 (Rat) > 2,000 mg/kg
Acute inhalation toxicity: LC50 (Rat) > 2.06 mg/l
Exposure time: 4 h
Acute dermal toxicity: LD50 (Rat) > 2,000 mg/kg
Skin irritation: Moderate skin irritation. (Rabbit)
Eye irritation  Severe eye irritation. (Rabbit)
Sensitisation  Sensitising (Mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – repeated exposure
Prothioconazole did not cause specific target organ toxicity in experimental animal studies.
Tebuconazole did not cause specific target organ toxicity in experimental animal studies.
Mefenpyr-diethyl did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity
Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Mefenpyr-diethyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity
Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.
Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.
Mefenpyr-diethyl was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH
None.

NTP
None.

IARC
None.

OSHA
None.

Assessment toxicity to reproduction
Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity.
Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.
Mefenpyr-diethyl did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity
Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity.
Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.
Mefenpyr-diethyl caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Mefenpyr-diethyl are related to maternal toxicity.
**Further information**

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the active ingredient(s).

### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity to fish**

<table>
<thead>
<tr>
<th>LC50 (Oncorhynchus mykiss (rainbow trout))</th>
<th>1.83 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 96 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient prothioconazole.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LC50 (Oncorhynchus mykiss (rainbow trout))</th>
<th>4.4 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 96 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient tebuconazole.</td>
<td></td>
</tr>
</tbody>
</table>

**Toxicity to aquatic invertebrates**

<table>
<thead>
<tr>
<th>EC50 (Daphnia magna (Water flea))</th>
<th>1.3 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 48 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient prothioconazole.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EC50 (Daphnia magna (Water flea))</th>
<th>2.79 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 48 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient tebuconazole.</td>
<td></td>
</tr>
</tbody>
</table>

**Chronic toxicity to aquatic invertebrates**

<table>
<thead>
<tr>
<th>NOEC (Daphnia (water flea))</th>
<th>0.01 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time: 21 d</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient tebuconazole.</td>
<td></td>
</tr>
</tbody>
</table>

**Toxicity to aquatic plants**

<table>
<thead>
<tr>
<th>IC50 (Raphidocelis subcapitata (freshwater green alga))</th>
<th>2.18 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate; Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient prothioconazole.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EC50 (Skeletonema costatum)</th>
<th>0.046 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate; Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient prothioconazole.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOEC (Skeletonema costatum)</th>
<th>0.0073 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate; Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient prothioconazole.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EC50 (Raphidocelis subcapitata (freshwater green alga))</th>
<th>3.8 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate; Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient tebuconazole.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EC50 (Lemna gibba (gibbous duckweed))</th>
<th>0.237 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate; Exposure time: 7 d</td>
<td></td>
</tr>
<tr>
<td>The value mentioned relates to the active ingredient tebuconazole.</td>
<td></td>
</tr>
</tbody>
</table>

**Biodegradability**

- Prothioconazole: Not rapidly biodegradable
- Tebuconazole: Not rapidly biodegradable
- Mefenpyr-diethyl: Not rapidly biodegradable
Not rapidly biodegradable

**Koc**
- Prothioconazole: Koc: 1765
- Tebuconazole: Koc: 769
- Mefenpyr-diethyl: Koc: 625

**Bioaccumulation**
- Prothioconazole: Bioconcentration factor (BCF) 19
  - Does not bioaccumulate.
- Tebuconazole: Bioconcentration factor (BCF) 35 - 59
  - Does not bioaccumulate.
- Mefenpyr-diethyl: Bioconcentration factor (BCF) 232
  - Does not bioaccumulate.

**Mobility in soil**
- Prothioconazole: Slightly mobile in soils
- Tebuconazole: Slightly mobile in soils
- Mefenpyr-diethyl: Slightly mobile in soils

**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

**Waste treatment methods**
- **Product**
  - Dispose in accordance with all local, state/provincial and federal regulations.
  - Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

- **Contaminated packaging**
  - Do not re-use empty containers.
  - Consult state and local regulations regarding the proper disposal of container.
  - Follow advice on product label and/or leaflet.

---

### SECTION 14: TRANSPORT INFORMATION

**TDG**
- UN number: 3082
- Labels: 9
- Packaging group: III
- Marine pollutant: Marine pollutant
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE)

**49CFR**
- Not dangerous goods / not hazardous material

**IMDG**
- UN number: 3082
SAFETY DATA SHEET

PROSARO XTR
Version 1.0 / CDN

Class 9
Packaging group III
Marine pollutant YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUConazole, PROTHIOCONAZOLE SOLUTION)

IATA
UN number 3082
Class 9
Packaging group III
Environn. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUConazole, PROTHIOCONAZOLE SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Further Information Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 32824
US Federal Regulations TSCA list None.
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 None.
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 None.
Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
Tebuconazole 107534-96-3

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms
49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
ATE Acute toxicity estimate
CAS-Nr. Chemical Abstracts Service number
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
N.O.S. Not otherwise specified
NTP US. National Toxicology Program (NTP) Report on Carcinogens
OECD Organization for Economic Co-operation and Development
TDG Transportation of Dangerous Goods
TWA Time weighted average
UN United Nations
WHO World health organisation

NFPA 704 (National Fire Protection Association):
Health - 3 Flammability - 1 Instability - 0 Others - none

Health - 3 Flammability - 1 Physical Hazard - 0 PPE -
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 06/02/2017

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