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

Product identifier
Trade name
Trade name
Roundup Xtend™ with VaporGrip™ Technology
Product code (UVP)
Product code (UVP)
62289676
SDS Number
SDS Number
102000039962
PCP Registration No.
PCP Registration No.
32274

Relevant identified uses of the substance or mixture and uses advised against
Use
Herbicide
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
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
This material is not hazardous under the criteria of Part 2 of the Hazardous Products 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>Dicamba-diglycolamine</td>
<td>104040-79-1</td>
<td>14.5</td>
</tr>
<tr>
<td>Glyphosate-Ethanolamine</td>
<td>40465-76-7</td>
<td>29.2</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
Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. 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

Risks
This product is not a cholinesterase inhibitor.

Treatment
Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
High volume water jet
**SAFETY DATA SHEET**

**ROUNDUP XTEND™ WITH VAPORGRIP™ TECHNOLOGY**

Version 1.0 / CDN 102000039962
Revision Date: 01/13/2021
Print Date: 01/15/2021

| Special hazards arising from the substance or mixture | In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of phosphorus |
| Advice for firefighters | In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use. |
| Special protective equipment for firefighters | In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use. |
| 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 | does not flash |
| Auto-ignition temperature | No data available |
| Lower explosion limit | Not applicable |
| Upper explosion limit | Not applicable |
| Explosivity | Not explosive |

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**Precautions**

Use personal protective equipment. Keep unauthorized people away. 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. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice**

Use personal protective equipment. If the product is accidentally spilled, do not allow it to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

**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**

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

**Advice on safe handling**

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
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. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities
Store in original container. 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. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
No known occupational limit values.

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
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Eye protection
Use tightly sealed goggles and face protection.
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form  Liquid, clear
Colour  green
Odour  sweet
Odour Threshold  No data available
pH  5.1 - 5.3 (8.5 %) (23 °C) (deionized water)
Melting point/range  No data available
Boiling Point  No data available
Flash point  does not flash
Flammability  No data available
Auto-ignition temperature  No data available
Minimum ignition energy  Not applicable
Self-accelerating decomposition temperature (SADT)  No data available
Upper explosion limit  Not applicable
Lower explosion limit  Not applicable
Vapour pressure  No data available
Evaporation rate  No data available
Relative vapour density  No data available
Relative density  No data available
Density  1.23 g/cm³ (20 °C)
Water solubility  soluble
Partition coefficient: n-octanol/water  Glyphosate: log Pow: < -3.2 (25 °C)
Dicamba, diglycolamine salt: log Pow: 2.21
Dicamba: log Pow: 0.54
Viscosity, dynamic  No data available
Viscosity, kinematic  No data available
Oxidizing properties  No oxidizing properties
Explosivity  Not explosive
Other information  Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition  Stable under normal conditions.
Chemical stability  Stable under recommended storage conditions.
Possibility of hazardous reactions  Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Conditions to avoid  Extremes of temperature and direct sunlight.
Incompatible materials  Galvanised steel, Unlined mild steel
Hazardous decomposition products  No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes  Skin contact, Eye contact, Inhalation
Immediate Effects
Eye  Not expected to produce significant adverse effects when recommended use instructions are followed.
Skin  Not expected to produce significant adverse effects when recommended use instructions are followed.
Ingestion  Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation  Not expected to produce significant adverse effects when recommended use instructions are followed.
Information on toxicological effects
Acute oral toxicity  LD50 (Rat) > 5,000 mg/kg
Test conducted with a similar formulation.
No deaths
Acute inhalation toxicity  LC50 (Rat) > 5.13 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
### Acute dermal toxicity
LD50 (Rat) > 5,000 mg/kg
Test conducted with a similar formulation.
No deaths

### Skin corrosion/irritation
Slight irritant effect - does not require labelling. (Rabbit)
Test conducted with a similar formulation.

### Serious eye damage/eye irritation
Slight irritant effect - does not require labelling. (Rabbit)
Test conducted with a similar formulation.

### Respiratory or skin sensitisation
Skin: Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test
Test conducted with a similar formulation.

### Assessment STOT Specific target organ toxicity – single exposure
Dicamba, diglycolamine salt: Based on available data, the classification criteria are not met.
Glyphosate: Based on available data, the classification criteria are not met.

### Assessment STOT Specific target organ toxicity – repeated exposure
Dicamba, diglycolamine salt: Based on available data, the classification criteria are not met.
Glyphosate did not cause specific target organ toxicity in experimental animal studies.

### Assessment mutagenicity
Dicamba, diglycolamine salt: Based on available data, the classification criteria are not met.
Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity
Dicamba, diglycolamine salt: Based on available data, the classification criteria are not met.
Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.
Important comment to IARC Listing: Our expert opinion is that classification as a carcinogen is not warranted.

### ACGIH
None.

### NTP
None.

### IARC
**Glyphosate-Ethanolamine** 40465-76-7 Overall evaluation: 2A

### OSHA
None.

### Assessment toxicity to reproduction
Dicamba, diglycolamine salt: Based on available data, the classification criteria are not met.
Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

### Assessment developmental toxicity
Dicamba, diglycolamine salt: Based on available data, the classification criteria are not met.
Glyphosate did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Test Value</th>
<th>Exposure Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 (Lepomis macrochirus (Bluegill sunfish))</td>
<td>47 mg/l</td>
<td>Static test; Exposure time: 96 h</td>
</tr>
<tr>
<td>\n</td>
<td></td>
<td>The value mentioned relates to the active ingredient glyphosate.</td>
</tr>
</tbody>
</table>

**Chronic toxicity to fish**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Test Value</th>
<th>Exposure Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>NOEC: &gt;= 9.63 mg/l</td>
<td>Flow-through test</td>
</tr>
<tr>
<td>\n</td>
<td></td>
<td>The value mentioned relates to the active ingredient glyphosate.</td>
</tr>
</tbody>
</table>

**Toxicity to aquatic invertebrates**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Test Value</th>
<th>Exposure Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 (Crassostrea gigas (Portuguese oyster))</td>
<td>40 mg/l</td>
<td>Static test; Exposure time: 48 h</td>
</tr>
<tr>
<td>\n</td>
<td></td>
<td>The value mentioned relates to the active ingredient glyphosate.</td>
</tr>
</tbody>
</table>

**Chronic toxicity to aquatic invertebrates**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Test Value</th>
<th>Exposure Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 (Daphnia magna (Water flea))</td>
<td>12.5 mg/l</td>
<td>Exposure time: 21 d</td>
</tr>
<tr>
<td>\n</td>
<td></td>
<td>The value mentioned relates to the active ingredient glyphosate.</td>
</tr>
</tbody>
</table>

**Toxicity to aquatic plants**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Test Value</th>
<th>Exposure Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ErC50 (Skeletonema costatum)</td>
<td>13.5 mg/l</td>
<td>Growth rate; Exposure time: 72 h</td>
</tr>
<tr>
<td>\n</td>
<td></td>
<td>The value mentioned relates to the active ingredient glyphosate.</td>
</tr>
</tbody>
</table>

**Biodegradability**

- **Glyphosate**: Not rapidly biodegradable
- **Dicamba, diglycolamine salt**: Not readily biodegradable.

**Koc**

- **Glyphosate**: Koc: 884 - 60000

**Bioaccumulation**

- **Glyphosate**: Bioconcentration factor (BCF) < 1
  - Does not bioaccumulate.
- **Dicamba, diglycolamine salt**: No significant accumulation in organisms.

**Mobility in soil**

- **Glyphosate**: Slightly mobile in soils
- **Dicamba, diglycolamine salt**: Highly mobile in soils

**Results of PBT and vPvB assessment**

**PBT and vPvB assessment**

- **Glyphosate**: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
- **Dicamba, diglycolamine salt**: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

**Additional ecological information**

No further ecological information is available.
Environmental precautions

Apply this product as specified on the label.
Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
Retain and dispose of contaminated wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
Do not contaminate water, food, or feed by disposal.
Follow all local/regional/national/international regulations.

Contaminated packaging
Follow advice on product label and/or leaflet.
Do not re-use empty containers.
Triple rinse containers.
Puncture container to avoid re-use.
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.
If burned, stay out of smoke.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 32274

PMRA Information:
Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product regulated by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:
Hazard statements: Avoid inhalation of vapour or mist. Do not get in eyes, on skin, or on clothing.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

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):

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>none</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 01/13/2021

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.