SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: RELY® 280
MSDS Number: 102000020747
EPA Registration No.: 264-829

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>Glufosinate ammonium</td>
<td>77182-82-2</td>
<td>24.50</td>
</tr>
<tr>
<td>Sodium alkyl ether sulphate</td>
<td>68585-34-2</td>
<td></td>
</tr>
<tr>
<td>1-Methoxy-2-propanol</td>
<td>107-98-2</td>
<td></td>
</tr>
<tr>
<td>Dipropylene glycol</td>
<td>25265-71-8</td>
<td></td>
</tr>
<tr>
<td>Alkyl polysaccharide</td>
<td>68515-73-1</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview
Warning! May be fatal if absorbed through skin. Causes substantial but temporary eye injury. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Physical State
liquid

Appearance
red

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

Immediate Effects
Eye
Severe eye irritation. Causes substantial but temporary eye injury. Do not get in eyes.

Skin
May cause skin irritation. Skin sensitizer May be fatal if absorbed through skin. Do not get in eyes, on skin, or on clothing.
Ingestion
Harmful if swallowed. Do not take internally.

Inhalation
May cause irritation. Avoid breathing spray mist.

Chronic or Delayed Long-Term
This product or its components may have target organ effects.

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
Treat symptomatically. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Flash point
> 93.4 °C / 200.1 °F

Fire and Explosion Hazards
In the event of fire the following may be released:
Carbon monoxide (CO)
Sulphur oxides
Carbon dioxide (CO2)

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

Unsuitable extinguishing media
High volume water jet
Fire Fighting Instructions
Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. 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

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

Methods for cleaning up
Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice
Do not allow product to contact vegetation. Use personal protective equipment.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation.

Keep away from heat and sources of ignition.

Storing Procedures
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.

Work/Hygienic Procedures
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. Wash thoroughly and put on clean clothing.

Min/Max Storage Temperatures
Recommended maximum transport/storage temperature: 51 °C / 124 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Train employees in safe use of the product. Follow all label instructions.

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.

**Eye/Face Protection**
Tightly fitting safety goggles

**Hand protection**
Chemical resistant nitrile rubber gloves

**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>Compound</th>
<th>CAS Number</th>
<th>Standard</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glufosinate ammonium</td>
<td>77182-82-2</td>
<td>OES BCS*</td>
<td>0.9 mg/m³</td>
</tr>
<tr>
<td>1-Methoxy-2-propanol</td>
<td>107-98-2</td>
<td>ACGIH</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z1A</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z1A</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US CA OEL</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US CA OEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>1,000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TX ESL</td>
<td>100 ppm</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>red</td>
</tr>
<tr>
<td>Physical State</td>
<td>liquid</td>
</tr>
<tr>
<td>pH</td>
<td>6.6 - 7.4 (100 %) at 20 °C</td>
</tr>
<tr>
<td>Density</td>
<td>1.15 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>100 - 300 mPa.s at 20 °C</td>
</tr>
</tbody>
</table>

**SECTION 10. STABILITY AND REACTIVITY**

**Conditions to Avoid**
Heat, flames and sparks.
Exposure to moisture.

**Incompatibility**
Strong acids
Bases
Strong oxidizing agents

Hazardous Reactions Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity data have been bridged from a very similar formulation containing a similar concentration of the active ingredient, glufosinate-ammonium. The non-acute information pertains to the technical-grade active ingredient.

**Acute Oral Toxicity**
- female rat: LD50: > 300 - < 2,000 mg/kg

**Acute Dermal Toxicity**
- male rat: LD50: 1,400 mg/kg
- female rat: LD50: 800 mg/kg

**Acute Inhalation Toxicity**
- male/female combined rat: LC50: > 2.1 mg/l
  - Exposure time: 4 h
  - Determined in the form of liquid aerosol.
- male/female combined rat: LC50: > 8.4 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: Severe eye irritation.

**Sensitization**
- guinea pig: sensitizing

**Chronic Toxicity**
Glufosinate-ammonium caused kidney effects and/or mortality at high dose levels in chronic toxicity studies in rats, mice and dogs.

**Assessment Carcinogenicity**
- Glufosinate-ammonium was not carcinogenic in lifetime feeding studies in rats and mice.
  - ACGIH: None.
  - NTP: None.
  - IARC: None.
  - OSHA: None.

**Reproductive & Developmental Toxicity**
- REPRODUCTION: Glufosinate-ammonium was not a primary reproductive toxicant in rats. There was a decrease in the number of viable pups at the high
dose in conjunction with maternal toxicity.

DEVELOPMENTAL TOXICITY: Glufosinate-ammonium was not a primary developmental toxicant in rats and rabbits. Developmental effects (e.g., delayed ossifications) were observed in rats but were considered secondary to maternal toxicity.

**Neurotoxicity**

Glufosinate-ammonium was not a neurotoxicant in acute and subacute neurotoxicity screening studies in rats. In a developmental neurotoxicity study in rats, offspring exposed to glufosinate-ammonium showed increases in locomotor activities. These effects occurred at high doses and in conjunction with maternal toxicity.

**Mutagenicity**

Glufosinate-ammonium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental Precautions**

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.

Do not allow to get into surface water, drains and ground water. Drift or runoff from treated areas may adversely affect non-target plants.

Apply this product as specified on the label. Do not apply when weather conditions favor runoff or drift.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance**

Do not contaminate water, food, or feed by disposal. 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:
Not regulated for Transportation

FREIGHT CLASSIFICATION:
Compounds, Tree or Weedkilling, N.O.I., other than poison, having a density of 20 LBS or greater per cubic foot

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 264-829

US Federal Regulations
TSCA list
- Sodium alkyl ether sulphate 68585-34-2
- 1-Methoxy-2-propanol 107-98-2
- Dipropylene glycol 25265-71-8
- Alkyl polysaccharide 68515-73-1

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
1-Methoxy-2-propanol 107-98-2 CA, IL, MN, RI

Canadian Regulations
Canadian Domestic Substance List
- Sodium alkyl ether sulphate 68585-34-2
- 1-Methoxy-2-propanol 107-98-2
- Dipropylene glycol 25265-71-8
- Alkyl polysaccharide 68515-73-1

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 - 2  Flammability - 1  Reactivity - 1  Others - none
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated Section 2: Composition/Information on Ingredients

Revision Date: 01/15/2009

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.