

**Material Safety Data Sheet****RELY® 280**

MSDS Number: 102000020747

MSDS Version 1.1

Revision Date: 01/15/2009

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

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Glufosinate ammonium	77182-82-2	24.50
Sodium alkyl ether sulphate	68585-34-2	
1-Methoxy-2-propanol	107-98-2	
Dipropylene glycol	25265-71-8	
Alkyl polysaccharide	68515-73-1	

SECTION 3. HAZARDS IDENTIFICATION

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

<u>Emergency Overview</u>	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.

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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 (CO ₂)
Suitable Extinguishing Media	Carbon dioxide (CO ₂), Dry powder, Foam, Water spray
Unsuitable extinguishing media	High volume water jet

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RELY® 280**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



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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

Glufosinate ammonium	77182-82-2	OES BCS*		0.9 mg/m3
1-Methoxy-2-propanol	107-98-2	ACGIH	TWA	100 ppm
		ACGIH	STEL	150 ppm
		NIOSH	REL	100 ppm
		NIOSH	STEL	150 ppm
		OSHA Z1A	TWA	100 ppm
		OSHA Z1A	STEL	150 ppm
		US CA OEL	TWA PEL	100 ppm
		US CA OEL	STEL	150 ppm
		TX ESL	ST ESL	1,000 ppm
		TX ESL	AN ESL	100 ppm

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	red
Physical State	liquid
pH	6.6 - 7.4 (100 %) at 20 °C
Density	1.15 g/cm ³ at 20 °C
Viscosity	100 - 300 mPa.s at 20 °C

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid	Heat, flames and sparks. Exposure to moisture.
Incompatibility	Strong acids

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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

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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.

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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
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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
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Environmental**CERCLA**

None.

Clean Water Section 307 Priority Pollutants

None.



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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

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