

<p style="text-align: center;"><b>MONSANTO COMPANY</b> Safety Data Sheet Commercial Product</p>
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## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name**

**Roundup PRO® Concentrate Herbicide**

**EPA Reg. No.**

524-529

**Chemical name**

Not applicable.

**Synonyms**

None.

**Company**

MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO, 63167

Telephone: 800-332-3111, Fax: 314-694-5557

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**Emergency numbers**

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).

FOR MEDICAL EMERGENCY - Day or Night: +1 (314) 694-4000 (collect calls accepted).

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## 2. HAZARDS IDENTIFICATION

**Emergency overview**

**Appearance and odour (colour/form/odour):** Pale amber - Pale brown / Liquid, (viscous) / Slight

CAUTION!

CAUSES MODERATE EYE IRRITATION

**Potential health effects**

**Likely routes of exposure**

Skin contact, eye contact, inhalation

**Eye contact, short term**

Causes moderate but temporary eye irritation.

**Skin contact, short term**

Not expected to produce significant adverse effects when recommended use instructions are followed.

**Inhalation, short term**

Not expected to produce significant adverse effects when recommended use instructions are followed.

**Single ingestion**

Not expected to produce significant adverse effects when recommended use instructions are followed.

Refer to section 11 for toxicological and section 12 for environmental information.

**OSHA Status**

This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Active ingredient**

Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

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## 6. ACCIDENTAL RELEASE MEASURES

### Environmental precautions

#### SMALL QUANTITIES:

Low environmental hazard.

#### LARGE QUANTITIES:

Minimise spread.

Keep out of drains, sewers, ditches and water ways.

### Methods for cleaning up

Contain spillage with sand bags or other means.

Absorb in earth, sand or absorbent material.

Dig up heavily contaminated soil.

Collect in containers for disposal.

Refer to section 7 for types of containers.

Flush residues with small quantities of water.

Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

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## 7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

### Handling

Avoid contact with eyes, skin and clothing.

When using do not eat, drink or smoke.

Wash hands thoroughly after handling or contact.

Wash contaminated clothing before re-use.

Thoroughly clean equipment after use.

Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.

Refer to section 13 of the safety data sheet for disposal of rinse water.

Emptied containers retain vapour and product residue.

**FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.**

### Storage

Compatible materials for storage: stainless steel, fibreglass, plastic, glass lining

Incompatible materials for storage: unlined mild steel, galvanised steel, see section 10.

Keep out of reach of children.

Keep away from food, drink and animal feed.

Keep only in the original container.

Keep container tightly closed in a cool, well-ventilated place.

Recommended maximum shelf life: 2 years.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Surfactant	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

### **Hazardous decomposition**

Thermal decomposition: Hazardous products of combustion: see section 5.

### **Self-accelerating decomposition temperature (SADT)**

No data.

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## **11. TOXICOLOGICAL INFORMATION**

This section is intended for use by toxicologists and other health professionals.

Data obtained on similar products and on components are summarized below.

### **Similar formulation**

#### **Acute oral toxicity**

**Rat, LD50:** > 5,000 mg/kg body weight

Practically non-toxic.

FIFRA category IV.

#### **Acute dermal toxicity**

**Rat, LD50:** > 5,000 mg/kg body weight

Practically non-toxic.

FIFRA category IV.

#### **Skin irritation**

**Rabbit, 6 animals, OECD 404 test:**

Days to heal: 10

Primary Irritation Index (PII): 1.7/8.0

Slight irritation.

FIFRA category IV.

#### **Eye irritation**

**Rabbit, 6 animals, OECD 405 test:**

Days to heal: 7

Moderate irritation.

FIFRA category III.

#### **Acute inhalation toxicity**

**Rat, LC50, 4 hours, aerosol:**

Practically non-toxic.

FIFRA category IV.

No 4-hr LC50 at the maximum achievable concentration.

#### **Skin sensitization**

**Guinea pig, 3-Induction Buehler test:**

Positive incidence: 0 %

Negative.

No skin sensitization

### **N-(phosphonomethyl)glycine; { glyphosate }**

#### **Mutagenicity**

**In vitro and in vivo mutagenicity test(s):**

Not mutagenic.

#### **Repeated dose toxicity**

**Rabbit, dermal, 21 days:**

NOAEL toxicity: > 5,000 mg/kg body weight/day

Target organs/systems: none

Other effects: none

**Rat, oral, 3 months:**

Acute toxicity, 48 hours, static, EC50: 11 mg/L  
Slightly toxic.

**Avian toxicity**

**Mallard duck (*Anas platyrhynchos*):**

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet  
Practically non-toxic.

**Bobwhite quail (*Colinus virginianus*):**

Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet  
Practically non-toxic.

**Arthropod toxicity**

**Honey bee (*Apis mellifera*):**

Oral/contact, 48 hours, LD50: > 100 µg/bee  
Practically non-toxic.

**Soil organism toxicity, invertebrates**

**Earthworm (*Eisenia foetida*):**

Acute toxicity, 14 days, LC50: > 1,250 mg/kg soil  
Practically non-toxic.

**Similar formulation**

**Aquatic toxicity, algae/aquatic plants**

**Green algae (*Selenastrum capricornutum*):**

Acute toxicity, 72 hours, static, EbC50 (biomass): 12.4 mg/L  
Slightly toxic.

**N-(phosphonomethyl)glycine: { glyphosate }**

**Bioaccumulation**

**Bluegill sunfish (*Lepomis macrochirus*):**

Whole fish: BCF: < 1  
No significant bioaccumulation is expected.

**Dissipation**

**Soil, field:**

Half life: 2 - 174 days  
Koc: 884 - 60,000 L/kg  
Adsorbs strongly to soil.

**Water, aerobic:**

Half life: < 7 days

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## 13. DISPOSAL CONSIDERATIONS

**Product**

Keep out of drains, sewers, ditches and water ways.  
Recycle if appropriate facilities/equipment available.  
Burn in proper incinerator.  
Follow all local/regional/national/international regulations.

**Container**

See the individual container label for disposal information.  
Triple or pressure rinse empty containers.  
Pour rinse water into spray tank.  
Store for collection by approved waste disposal service.  
Recycle if appropriate facilities/equipment available.  
Emptied containers retain vapour and product residue.  
Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.  
Follow all local/regional/national/international regulations.  
Do NOT re-use containers for any purpose other than for the storage of pesticides, if allowed by label.

the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

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