

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

**Product name**

**Roundup® Ridder RTU**

**CLP Annex VI Index No.**

Not applicable.

**C&L ID No.**

Not available.

**EC No.**

Not applicable.

**REACH Reg. No.**

Not applicable.

**CAS No.**

Not applicable.

**Product use**

Herbicide

**Chemical name**

Not applicable.

**Synonyms**

None.

**Company/(Sales office)**

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## 2. HAZARDS IDENTIFICATION

**This mixture has not yet been classified according to Regulation (EC) No. 1272/2008**

**EU label (manufacturer self-classification)** - Classification/Labeling following the EU Dangerous Preparations' Directive 1999/45/EC.

R52	Harmful to aquatic organisms.
S2	Keep out of reach of children.
S13	Keep away from food, drink and animal feedingstuffs.
S29	Do NOT empty into drains.
S35	This material and its container must be disposed of in a safe way.
S57	Use appropriate containment to avoid environmental contamination.

**Potential health effects**

**Likely routes of exposure**

Skin contact, eye contact

**Eye contact, short term**

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

**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.

### **Potential environmental effects**

Harmful to aquatic organisms.

Not a persistent, bioaccumulative or toxic (PBT) nor a very persistent, very bioaccumulative (vPvB) mixture.

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

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## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

### **Active ingredient**

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

### **Composition**

Components	CAS No.	EC No.	EU Index No. / REACH Reg. No. / C&L ID No.	% by weight (approximate)	Classification
Isopropylamine salt of glyphosate	38641-94-0	933-426-9	015-184-00-8 / - / 02-2119693876-15- 0000	1	Aquatic Chronic - Category 2; H411; { c} N; R51/53; { b}
Surfactant and minor formulating ingredients			- / - / -	2.5	
Water	7732-18-5	231-791-2	- / - / -	96.5	

Full text of classification code: See section 16.

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## **4. FIRST AID MEASURES**

Use personal protection recommended in section 8.

### **Eye contact**

Immediately flush with plenty of water.  
If easy to do, remove contact lenses.

### **Skin contact**

Take off contaminated clothing, wristwatch, jewellery.  
Wash affected skin with plenty of water.  
Wash clothes and clean shoes before re-use.

### **Inhalation**

Remove to fresh air.

### **Ingestion**

Immediately offer water to drink.  
Do NOT induce vomiting unless directed by medical personnel.  
If symptoms occur, get medical attention.

### **Advice to doctors**

This product is not an inhibitor of cholinesterase.

### **Antidote**

Treatment with atropine and oximes is not indicated.

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## **5. FIRE-FIGHTING MEASURES**

### **Flash point**

No data.

### **Extinguishing media**

Recommended: Water, foam, dry chemical, carbon dioxide (CO<sub>2</sub>)

#### **Unusual fire and explosion hazards**

None.

Environmental precautions: see section 6.

#### **Hazardous products of combustion**

Carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx)

#### **Fire fighting equipment**

Self-contained breathing apparatus.

Equipment should be thoroughly decontaminated after use.

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## **6. ACCIDENTAL RELEASE MEASURES**

#### **Personal precautions**

Use personal protection recommended in section 8.

#### **Environmental precautions**

SMALL QUANTITIES:

Low environmental hazard.

LARGE QUANTITIES:

Minimise spread.

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

#### **Methods for cleaning up**

SMALL QUANTITIES:

Flush spill area with water.

LARGE QUANTITIES:

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**

When using do not eat, drink or smoke.

Wash hands thoroughly after handling or contact.

Thoroughly clean equipment after use.

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

Emptied containers retain vapour and product residue.

Observe all labelled safeguards until container is cleaned, reconditioned or destroyed.

#### **Storage**

Minimum storage temperature: 0 °C

Maximum storage temperature: 45 °C

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

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

Keep out of reach of children.

Keep away from food, drink and animal feed.

Keep only in the original container.

Minimum shelf life: 5 years.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Surfactant and minor formulating ingredients	No specific occupational exposure limit has been established.
Water	No specific occupational exposure limit has been established.

### Engineering controls

No special requirement when used as recommended.

### Eye protection

No special requirement when used as recommended.

### Skin protection

No special requirement when used as recommended.

### Respiratory protection

No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Colour/colour range:	Yellow
Odour:	Slight, Soapy
Form:	Liquid
Physical form changes (melting, boiling, etc.):	
Freezing point:	No data.
Boiling point:	No data.
Flash point:	No data.
Explosive properties:	No data.
Auto ignition temperature:	No data.
Specific gravity:	1.005 @ 20 °C / 4 °C
Vapour pressure:	No significant volatility; aqueous solution.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	6 mPa·s @ 20 °C
Kinematic viscosity:	5.97 mm <sup>2</sup> /s
Density:	1.005 g/cm <sup>3</sup> @ 20 °C
Solubility:	Water: Completely miscible.
pH:	7.0 - 7.5
Partition coefficient:	log Pow: < -3.2 @ 25 °C (glyphosate)

## 10. STABILITY AND REACTIVITY

### Stability

Stable under normal conditions of handling and storage.

### Oxidizing properties

No data.

#### **Materials to avoid/Reactivity**

Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

#### **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 dermal toxicity**

**Rat, LD50 (limit test):** > 5,000 mg/kg body weight

No mortality.

#### **Skin irritation**

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

Redness, mean EU score: 0.00

Swelling, mean EU score: 0.00

#### **Eye irritation**

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

Conjunctival redness, mean EU score: 0.11

Conjunctival swelling, mean EU score: 0.06

Corneal opacity, mean EU score: 0.00

Iris lesions, mean EU score: 0.00

Days to heal: 3

#### **Skin sensitization**

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

Positive incidence: 0 %

Negative.

### **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:**

NOAEL toxicity: > 20,000 mg/kg diet

Target organs/systems: none

Other effects: none

#### **Chronic effects/carcinogenicity**

**Rat, oral, 24 months:**

NOAEL toxicity: ~ 8,000 mg/kg diet

Target organs/systems: eyes

Other effects: decrease of body weight gain, histopathologic effects

NOEL tumour: > 20,000 ppm

Tumours: none

### Toxicity to reproduction/fertility

#### **Rat, oral, 2 generations:**

- NOAEL toxicity: 10,000 ppm
- NOAEL reproduction: > 30,000 mg/kg diet
- Target organs/systems in parents: none
- Other effects in parents: decrease of body weight gain
- Target organs/systems in pups: none
- Other effects in pups: decrease of body weight gain
- Effects on offspring only observed with maternal toxicity.

### Developmental toxicity/teratogenicity

#### **Rat, oral, 6 - 19 days of gestation:**

- NOAEL toxicity: 1,000 mg/kg body weight
- NOAEL development: 1,000 mg/kg body weight
- Other effects in mother animal: decrease of body weight gain, decrease of survival
- Developmental effects: weight loss, post-implantation loss, delayed ossification
- Effects on offspring only observed with maternal toxicity.

#### **Rabbit, oral, 6 - 27 days of gestation:**

- NOAEL toxicity: 175 mg/kg body weight
- NOAEL development: 175 mg/kg body weight
- Target organs/systems in mother animal: none
- Other effects in mother animal: decrease of survival
- Developmental effects: none

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## 12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

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

### Similar glyphosate formulation

#### Aquatic toxicity, fish

##### **Golden orfe (*Leuciscus idus*):**

Acute toxicity, 96 hours, static, LC50: 491 mg/L

##### **Rainbow trout (*Oncorhynchus mykiss*):**

Acute toxicity, 96 hours, static, LC50: 322 mg/L

#### Aquatic toxicity, invertebrates

##### **Water flea (*Daphnia magna*):**

Acute toxicity, 48 hours, static, EC50: 1,634 mg/L

#### Aquatic toxicity, algae/aquatic plants

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

Acute toxicity, 72 hours, static, ErC50 (growth rate): 60 mg/L

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

#### Avian toxicity

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

Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet

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

Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet

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

Acute oral toxicity, single dose, LD50: > 3,851 mg/kg body weight

#### Arthropod toxicity

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

Oral, 48 hours, LD50: 100 µg/bee

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

Contact, 48 hours, LD50: > 100 µg/bee

#### 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

**Ethoxylated tallowamine**

**Dissipation**

**Water/sediment, aerobic, 30 °C:**

Half life: < 4 weeks

**Soil, aerobic:**

Half life: 1 - 7 days

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### 13. DISPOSAL CONSIDERATIONS

**Product**

Recycle if appropriate facilities/equipment available.  
Burn in special, controlled high temperature incinerator.  
Dispose of as hazardous industrial waste.  
Keep out of drains, sewers, ditches and water ways.  
Follow all local/regional/national/international regulations.

**Container**

Triple or pressure rinse empty containers.  
Pour rinse water into spray tank.  
Store for collection by approved waste disposal service.  
Dispose of as non hazardous industrial waste.  
Do NOT re-use containers.  
Follow all local/regional/national/international regulations.

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

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### 14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not regulated for transport under ADR/RID, IMO, or IATA/ICAO Regulations

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### 15. REGULATORY INFORMATION

**Other Regulatory Information**

SP1: Do not contaminate water with the product or its container.

**Chemical Safety Assessment**

A Chemical Safety Assessment per Regulation (EC) No. 1907/2006 is not required and has not been performed.  
A Risk Assessment has been performed under Directive 91/414/EC.

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### 16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.  
Follow all local/regional/national/international regulations.  
Please consult supplier if further information is needed.

This Safety Data Sheet has been prepared following the Regulation (EC) No. 1907/2006 (Annex II) as last amended by Regulation (EC) No. 453/2010

In this document the British spelling was applied.

**Classification of components**

Components	Classification
Isopropylamine salt of glyphosate	Aquatic Chronic - Category 2 H411 Toxic to aquatic life with long lasting effects. N - Dangerous for the environment R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Surfactant and minor formulating ingredients	
Water	

Endnotes:

- { a} EU label (manufacturer self-classification)
- { b} EU label (Annex I)
- { c} EU CLP classification (Annex VI)
- { d} EU CLP (manufacturer self-classification)

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

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**Safety Data Sheet (SDS) Annex**

Chemical Safety Report:

Read and follow label instructions.