

# MONSANTO Europe S.A.

## Safety Data Sheet Commercial Product

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1. Product identifier

##### **Roundup Fast Action Path & Drive Weedkiller**

- 1.1.1. **Chemical name**  
Not applicable for a mixture.
- 1.1.2. **Synonyms**  
None.
- 1.1.3. **CLP Annex VI Index No.**  
Not applicable.
- 1.1.4. **C&L ID No.**  
Not available.
- 1.1.5. **EC No.**  
Not applicable for a mixture.
- 1.1.6. **REACH Reg. No.**  
Not applicable for a mixture.
- 1.1.7. **CAS No.**  
Not applicable for a mixture.

#### 1.2. Product use

Herbicide

#### 1.3. Company/(Sales office)

MONSANTO Europe S.A.  
Haven 627, Scheldelaan 460, B-2040  
Antwerp, Belgium  
**Telephone:** +32 (0)3 568 51 11  
**Fax:** +32 (0)3 568 50 90  
**E-mail:**  
safety.datasheet@monsanto.com

#### 1.4. Emergency numbers

**Telephone:** Belgium +32 (0)3 568 51 23

### 2. HAZARDS IDENTIFICATION

#### 2.1. Classification

##### 2.1.1. Classification according to Regulation (EC) No. 1272/2008 [CLP] (manufacturer self-classification)

Not classified as dangerous.

##### 2.1.2. National classification - U.K., Ireland

Not classified as dangerous.

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

Not classified as dangerous.

S2	Keep out of reach of children.
S13	Keep away from food, drink and animal feedingstuffs.
S29	Do NOT empty into drains.

**National classification/labeling** - U.K., Ireland

Not classified as dangerous.

S2	Keep out of reach of children.
S7	Keep container tightly closed.
S13	Keep away from food, drink and animal feedingstuffs.
S24	Avoid contact with skin.
S28	After contact with skin, wash immediately with plenty of water.
S29/35	Do not empty into drains; dispose of this material and its container in a safe way.
S46	If swallowed, seek medical advice immediately and show this container or label.
S49	Keep only in the original container.
SP1	Do not contaminate water with the product or its container.

## 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

### 2.2.1. Precautionary statement/statements

P102	Keep out of reach of children.
P234	Keep only in original container

### 2.2.2. Supplemental hazard information (EU)

EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
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### 2.2.3. Precautionary statement/statements U.K., Ireland

P102	Keep out of reach of children.
P234	Keep only in original container

## 2.3. Other hazards

0% of the mixture consists of ingredient/ingredients of unknown acute toxicity.

0% of the mixture consists of ingredient/ingredients of unknown hazards to the aquatic environment.

### 2.3.1. Potential environmental effects

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

## 2.4. Appearance and odour (colour/form/odour):

Milky white-Yellowish /Liquid, (cloudy) / No information.

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Active ingredient

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

### 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 }
Pelargonic and related fatty acids	112-05-0	203-931-2	607-197-00-8 / - / -	1	Skin corrosion - Category 1B; H314, 318; { d } C; R34; { a }
Water and minor formulating ingredients			- / - / -	98	

Full text of classification code: See section 16.

## 4. FIRST AID MEASURES

Use personal protection recommended in section 8.

### 4.1. Description of first aid measures

#### 4.1.1. Eye contact

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

#### 4.1.2. Skin contact

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

#### 4.1.3. Inhalation

Remove to fresh air.

#### 4.1.4. Ingestion

Immediately offer water to drink. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

#### 4.2.1. Potential health effects

**Likely routes of exposure:** Skin contact, eye contact, inhalation

**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.

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## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

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

### 5.2. Special hazards

#### 5.2.1. Unusual fire and explosion hazards

None.

Minimise use of water to prevent environmental contamination.

Environmental precautions: see section 6.

#### 5.2.2. Hazardous products of combustion

Carbon monoxide (CO), phosphorus oxides (P<sub>x</sub>O<sub>y</sub>), nitrogen oxides (NO<sub>x</sub>)

### 5.3. Fire fighting equipment

Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

### 5.4. Flash point

Does not flash.

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## 6. ACCIDENTAL RELEASE MEASURES

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

### 6.1. Environmental precautions

SMALL QUANTITIES: Low environmental hazard. LARGE QUANTITIES: Minimise spread.

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

### 6.2. 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.

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## 7. HANDLING AND STORAGE

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

### 7.1. Precautions for safe handling

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.

### 7.2. Conditions for safe storage

Minimum storage temperature: 0 °C  
Maximum storage temperature: 45 °C  
Compatible materials for storage: stainless steel, fibreglass, plastic, glass lining  
Keep out of reach of children.  
Keep away from food, drink and animal feed.  
Keep only in the original container.  
Partial crystallization may occur on prolonged storage below the minimum storage temperature.  
If frozen, place in warm room and shake frequently to put back into solution.  
Minimum shelf life: 2 years.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Airborne exposure limits

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

### 8.2. Engineering controls

No special requirement when used as recommended.

### 8.3. Recommendations for personal protective equipment

#### 8.3.1. Eye protection:

No special requirement when used as recommended.

#### 8.3.2. Skin protection:

If repeated or prolonged contact:  
Wear chemical resistant gloves.  
Chemical resistant gloves include those made of waterproof materials such as nitrile, butyl, neoprene, polyvinyl chloride (PVC), natural rubber and/or barrier laminate.

#### 8.3.3. 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.

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## 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:	Milky white - Yellowish
Odour:	No information.
Form:	Liquid, (cloudy)
Physical form changes (melting, boiling, etc.):	
Melting point:	Not applicable.
Boiling point:	No data.
Flash point:	Does not flash.
Explosive properties:	No explosive properties
Auto ignition temperature:	No data.
Self-accelerating decomposition temperature (SADT):	No data.
Oxidizing properties:	No data.
Specific gravity:	1,018 @ 20 °C
Vapour pressure:	No significant volatility; aqueous solution.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	1,93 mPa·s @ 20 °C
Kinematic viscosity:	1.899 cSt @ 20 °C
Density:	1,018 g/cm <sup>3</sup> @ 20 °C
Solubility:	Water: Soluble
pH:	7,2 @ 20 °C @ 10 g/l
Partition coefficient:	log Pow: < -3,2 @ 25 °C (glyphosate)

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## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

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

### 10.2. Stability

Stable under normal conditions of handling and storage.

### 10.3. Possibility of hazardous reactions

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

### 10.4. Incompatible materials

Incompatible materials for storage: galvanised steel, unlined mild steel  
Compatible materials for storage: see section 7.2.

### 10.5. Hazardous decomposition

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

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## 11. TOXICOLOGICAL INFORMATION

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

**Likely routes of exposure:** Skin contact, eye contact, inhalation

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

### **Similar formulation**

#### **Acute oral toxicity**

**Rat, LD50 (limit test):** > 5.000 mg/kg body weight  
No mortality.

#### **Acute dermal toxicity**

**Rat, LD50 (limit test):** > 5.000 mg/kg body weight  
Other effects: weight loss  
No mortality.

#### **Skin irritation**

**Rabbit, 6 animals, OECD 404 test:**  
Redness, mean EU score: 0,00  
Swelling, mean EU score: 0,00  
Days to heal: 1

#### **Eye irritation**

**Rabbit, 6 animals, OECD 405 test:**  
Conjunctival redness, mean EU score: 0,50  
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

#### **Acute inhalation toxicity**

**Rat, LC50, 4 hours, aerosol:** > 3,6 mg/L  
Maximum attainable concentration. No mortality. This product is not aerosolized during handling or use and is therefore not classified as hazardous under the Dangerous Preparation Directive 1999/45/EC This product is not aerosolized during handling or use and is therefore not classified as hazardous under the CLP Regulation (EC 1272/2008).

#### **Skin sensitization**

**Guinea pig, 9-induction Buehler test:**  
Negative.

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

#### **Mutagenicity**

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 formulation**

#### **Aquatic toxicity, fish**

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

Acute toxicity (limit test), 96 hours, static, LC50: > 100 mg/L

#### **Aquatic toxicity, invertebrates**

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

Acute toxicity (limit test), 48 hours, static, EC50: > 100 mg/L

#### **Aquatic toxicity, algae/aquatic plants**

##### **Green algae (*Scenedesmus subspicatus*):**

Acute toxicity, 72 hours, static, ErC50 (growth rate): > 87,7 mg/L

##### **Green algae (*Scenedesmus subspicatus*):**

Acute toxicity, 72 hours, static, NOEC: 50 mg/L

#### **Arthropod toxicity**

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

Oral, 48 hours, LD50: > 9.742 µg/bee

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

Contact, 48 hours, LD50: 8.309 µg/bee

#### **Soil organism toxicity, invertebrates**

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

Acute toxicity, 14 days, LC50: > 1.000 mg/kg dry soil

### **Similar formulation**

#### **Soil organism toxicity, microorganisms**

##### **Nitrogen and carbon transformation test:**

388 L/ha, 28 days: Less than 25% effect on nitrogen or carbon transformation processes in soil.

### **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

#### 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

### 13.1. Waste treatment methods

#### 13.1.1. Product

Follow all local/regional/national/international regulations on waste disposal. Follow current edition of the General Waste, Landfill, and Burning of Hazardous Waste Directives; the EU List of Waste; and the Shipment of Waste Regulation. Keep out of drains, sewers, ditches and water ways. According to the manufacturer self-classification, following the EU Dangerous Preparations' Directive 1999/45/EC, the product can be disposed as a non-hazardous industrial waste. Disposal in a waste incinerator with energy recovery is recommended. According to the manufacturer self-classification, following Regulation (EC) No. 1272/2008 [CLP], the product can be disposed as a non-hazardous industrial waste.

#### 13.1.2. Container

Follow all local/regional/national/international regulations on waste disposal, packaging waste collection/disposal. Follow current edition of the General Waste, Landfill, and Burning of Hazardous Waste Directives; the EU List of Waste; and the Shipment of Waste Regulation. Do NOT re-use containers. Empty packaging completely. Dispose of as non hazardous household waste. Store for collection by approved waste disposal service for household packaging waste. Recycle if appropriate facilities/equipment available. Recycle the non-hazardous container only when a proper control on the end use of the recycled plastic is possible. Suitable for industrial grade recycling only. Do NOT recycle plastic that could end in any human or food contact application. This package meets the requirements for energy recovery. Disposal in a incinerator with energy recovery is recommended.

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

### 15.1. Other Regulatory Information

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



## 15.2. 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.

## 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.

In this document the British spelling was applied.

® Registered trademark.

|| Significant changes versus previous edition.

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

### 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.
Pelargonic and related fatty acids	Skin corrosion - Category 1B H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. C - Corrosive R34 Causes burns.
Water and minor formulating ingredients	

### 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.

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End of document

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