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# Landscaping (Whitings)

## Contents

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B61 0RJ  
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# Contents

**Scope of Works**

**Certificates/Warranties/Guarantees**

**Cleaning and Maintenance Regimes**

**Data Sheets**



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## Scope of Works



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## OPERATION AND MAINTENANCE MANUAL

### SECTION 1.0

#### SCOPE OF WORKS

#### Wingates Ind Estate Bolton Unit 3

**Provided by:**

Whiting Landscape Ltd  
Wildmoor Lane  
Bromsgrove  
Worcestershire  
B61 0RJ

Tel: 01527 836292

Email: [office@whitinglandscape.co.uk](mailto:office@whitinglandscape.co.uk)

**Site Address:**

Unit 3  
Panattoni Park  
Wingates Industrial Estate  
Bolton  
BL5 3XN

Winvic Contract Number: P23012

WLL Contract Number: 7454

## OPERATION AND MAINTENANCE MANUAL

### SECTION 1.0

#### SCOPE OF WORKS

#### Wingates Ind Estate Bolton Unit 3

##### Plant Schedule

Type	Plant Name	Potential Hazard
Trees	Acer Campestre	N/A
	Betula Pendula	N/A
	Prunus Padus	Poisonous
	Pyrus Calleryana	N/A
	Quercus	Leaves, unleached acorns poisonous
Ornamental Shrub	Tilia Cordata	N/A
	Berberis	Thorns
	Brachyglottis	N/A
	Cotoneaster	N/A
	Escallonia	N/a
	Hebe	N/A
	Lonicera	N/A
	Osmanthus	N/A
	Persicaria Affinis	N/A
	Prunus lauracerasus	Poisonous
	Skimmia	N/A
	Spiraea	N/A
	Acer Campestre	N/A
	Corylus avellana	N/A
	Crataegus	Thorns
Native and Hedge	Ilex	Spiny leaves
	Lonicera	N/A
	Ligustrum	Poisonous
	Prunus Padus	Poisonous
	Pinus	N/A
	Rosa	Thorns
	Galanthus	N/A
Bulb Planting	Narcissus	Poisonous; skin irritant

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## **Certificates/Warranties/Guarantees**

**N/A**



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## **OPERATION AND MAINTENANCE MANUAL**

### **SECTION 2.0**

#### **CERTIFICATES / WARRANTIES / TEST CERTIFICATES**

**Wingates IND. Estate, Bolton Unit 3**

**NOT APPLICABLE TO THE LANDSCAPE INSTALLATION**

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# Cleaning and Maintenance Regimes



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## Cleaning and Maintenance Regimes

This maintenance schedule for P23012 Wingates Plot 3 to be followed from PC date 01/07/2024 year on year to ensure all plant and equipment is kept within warranty.

Please keep a log of these inspections so that records can be checked should an issue arise.

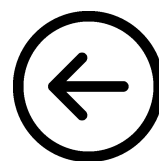
**Code; ✓ Blue – Recommended ✓ Red – To Maintain Warranty**

Item	Daily	Weekly	Monthly	3 Months	6 Months	9 Months	Annually	5 Yearly	Certificates	Regime
Shrubs			✓							Apply fertiliser as per manufacturer's instructions
			✓							Edge up planted areas
							✓			Prune to remove dead/diseased wood and to keep in shape. Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area
Trees							✓			Check tree ties and adjust if necessary.
										Refirm after frost heave or strong winds
							✓			Prune by making cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area
Native Hedge				✓						Check and repair damage to rabbit protection
Grass										One grass cut March to Mid April / Three grass cuts mid April to mid May / 13 grass cuts mid May to September / Two grass cuts October November
										Shape grass edges at each cut
				✓						Apply fertiliser / herbicide
							✓			Early September cut down to 200mm

Item	Daily	Weekly	Monthly	3 Months	6 Months	9 Months	Annually	5 Yearly	Certificates	Regime
										Spot treat aggressive perennial weeds in wildflower areas as necessary
Bark mulch							✓			Top up bark

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## Data Sheets



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## **OPERATION AND MAINTENANCE MANUAL**

### **SECTION 4.0**

#### **DATA SHEETS**

#### **Wingates IND. Estate, Bolton Unit 3**

##### **Hazardous Plants**

Nursery stock – refer to enclosed data – ‘hazardous plants’.












Do not ingest or handle potentially hazardous plants.

Where a plant is considered poisonous, gloves should be worn and care should be taken during handling to avoid touching the face, particularly around the mouth. Wash hands immediately after handling and always before eating/drinking.









Where a plant is considered irritant, gloves should be worn, and care should be taken during handling to avoid the plant coming into contact with exposed skin. Wash hands immediately after handling and always before eating/drinking.

Care should be taken when handling thorn bearing plants to avoid cuts and scratches, particularly to the eyes.

No other hazards identified throughout the landscape installation process including the presence of asbestos, contaminated land, water bearing strata or buried services. However, the landscape contractor is not responsible for the introduction of such hazards by other parties following completion of the landscape installation.

		<b>COSHH Risk Assessment No: CA011</b>						
Chemical Name: Round Up Provantage								
Name of substance, manufacturer and safety data sheet reference.		Substance: Round Up Provantage 480, Manufacturer: MONSANTO Europe N.V., Haven 627, Scheldelaan 460, B-2040 Antwerp, Belgium Emergency Telephone: Belgium +32 (0)3 568 51 23 SDS Ref: version: 1.1. 1, 6 <sup>th</sup> September 2016.						
Describe the activity or process <i>(Include how long and how often this is carried out and the quantity of substance used. A copy of a current safety data sheet (SDS) for the substance should be attached to this assessment and cross-referenced when completing it).</i>		Application of herbicide form the treatment of existing weed growth for maintenance purposes and to proposed new landscaping areas.  Appropriate for selective use in the aquatic environment.  A maximum of 6 hours per day for 2-3 days per week.						
Specify where the activity or process is being carried out		External landscaping areas.						
Identify the persons at risk:		Employees (including trainees) <input checked="" type="checkbox"/>	Contractors <input checked="" type="checkbox"/>	Public (including students) <input type="checkbox"/>				
<b>Hazard(s)</b>								
Physical Nature of Hazard - SDS Section 9.1								
<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Dust	<input type="checkbox"/> Solid	<input type="checkbox"/> Fume	<input type="checkbox"/> Mist	<input type="checkbox"/> Vapour	<input type="checkbox"/> Gas	<input type="checkbox"/> Other (state) _____	
Classification of Hazard - SDS Section 2.2								
 Moderate hazard <input type="checkbox"/>	 Acutely toxic <input type="checkbox"/>	 Corrosive <input type="checkbox"/>	 Health hazard <input type="checkbox"/>	 Flammable <input type="checkbox"/>	 Oxidising <input type="checkbox"/>	 Explosive <input type="checkbox"/>	 Gas under pressure <input type="checkbox"/>	 Harmful to the aquatic environment <input type="checkbox"/>
<b>Risk(s)</b>								
Signal Word - SDS Section 2.2 <b>Warning</b> <input type="checkbox"/> <b>Danger</b> <input type="checkbox"/>		Add Hazard Statement(s) - SDS Section 2.2 Not classified as dangerous  <b>Precautionary Statements</b> P234 Keep only in original container.  <b>Supplemental Hazard Information</b> EUH401 To avoid risks to human health and the environment, comply with the instructions for use.						
Route of Exposure - SDS Section 4.1								

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Inhalation	Ingestion	Skin Contact	Contact with Eyes	Other (state) _____
<b>Risks to Health – Most Important Symptoms and Effects - Refer to safety data sheet (attached) SDS Section 4.2</b>				
<p><b>Likely routes of exposure:</b> Skin contact, inhalation, eye contact, ingestion</p> <p><b>Eye contact, short term:</b> Not expected to produce significant adverse effects when recommended use instructions are followed.</p> <p><b>Skin contact, short term:</b> Not expected to produce significant adverse effects when recommended use instructions are followed.</p> <p><b>Inhalation, short term:</b> Not expected to produce significant adverse effects when recommended use instructions are followed.</p> <p><b>Single ingestion:</b> Not expected to produce significant adverse effects when recommended use instructions are followed.</p>				
<b>Workplace Exposure Limits (WELs) please indicate n/a where not applicable - SDS Section 8.1</b>				
Long-term exposure level (8hrTWA):  No specific occupational exposure limit has been established.		Short-term exposure level (15 minutes):		
<b>Control Measures: (for example extraction, ventilation, training, supervision) - SDS Section 8.2</b>				
<p><b>Engineering controls</b> No special requirement when used as recommended.</p> <p><b>Recommendations for personal protective equipment</b>  <b>Eye protection:</b> If there is significant potential for contact: Wear chemical goggles.</p> <p><b>Skin protection:</b>          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.</p> <p><b>Respiratory protection:</b> No special requirement when used as recommended.</p>				
<b>First Aid: Recommended Actions - SDS Section 4.1</b>				
<p><b>Eye contact:</b> Immediately flush with plenty of water. If easy to do, remove contact lenses. If there are persistent symptoms, obtain medical advice.</p> <p><b>Skin contact:</b> Take off contaminated clothing, wristwatch, jewellery. Wash affected skin with plenty of water. Wash clothes and clean shoes before re-use.</p> <p><b>Inhalation:</b> Remove to fresh air.</p> <p><b>Ingestion:</b> Immediately offer water to drink. Do NOT induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.</p>				
Is health surveillance or monitoring required?			Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>Personal Protective Equipment (state type and standard) - SDS Section 8.2</b>				

 <input type="checkbox"/>		 <input type="checkbox"/>	
Dust Mask		Visor	
 <input type="checkbox"/>	No special requirement when used as recommended.	 <input checked="" type="checkbox"/>	Safety glasses.
Respirator		Goggles	
 <input checked="" type="checkbox"/>	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.	 <input checked="" type="checkbox"/>	Suitable workwear.
Gloves		Overalls	
 <input checked="" type="checkbox"/>	Suitable footwear is to be worn which conforms to European (EN) standards.	 <input checked="" type="checkbox"/>	H-viz.
Footwear		Other	

#### Storage Arrangements - SDS Section 7.2

Minimum storage temperature: -15 °C  
Maximum storage temperature: 50 °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: 5 years.

#### Disposal of residual waste and Containers - SDS Section 13.1 and guidance

Hazardous Waste ☐ Skip ☐ Return to Depot ☐ Return to Supplier ☐ Other (state) ☒


(If Other Please State): **Product:** Keep out of drains, sewers, ditches and water ways. Follow all local/regional/national/international regulations on waste disposal. Follow current edition of the General Waste, Landfill, and Burning of Hazardous Waste Directives; and the Shipment of Waste Regulation. 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.

**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; and the Shipment of Waste Regulation. Do NOT re-use containers. Triple or pressure rinse empty containers. Pour rinse water into spray tank. Properly rinsed container can be disposed as a non hazardous industrial waste. Store for collection by approved waste disposal service. 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.

Firefighting measures, accidental release measures, toxicological information and ecological information are provided in the safety data sheet (attached).

Is exposure adequately controlled?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>Risk Rating After Implementation of Control Measures</b> (see guidance)			
High <input type="checkbox"/>	Medium <input type="checkbox"/>	Low <input checked="" type="checkbox"/>	
Assessed by: Andy Ellett (Tech IOSH, AIIRSM) Initiative Quality & Safety Ltd  Date: 02/01/2020	Reviewed by: L. Buckerfield Date: 02/01/2021	Previous Planned Review Date: 02/01/2022	
Reviewed by: L. Buckerfield Date: 03/01/2022	Reviewed by: Lindsey Robinson Date: 03/01/2023	Reviewed by: Lindsey Robinson Date: 02/01/2024	





**MONSANTO Europe S.A./N.V.**Safety Data Sheet  
Commercial Product**1. PRODUCT AND COMPANY IDENTIFICATION**

- 1.1. Product identifier**  
**Roundup® ProVantage**
- 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./N.V.  
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] - U.K.**  
Not classified as dangerous.
- 2.2. Label elements**  
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
- 2.2.1. Precautionary statement/statements U.K.**  
P234 Keep only in original container
- 2.2.2. Supplemental hazard information U.K.**  
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
- 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 expected to produce significant adverse effects when recommended use instructions are followed.

MONSANTO Europe S.A./N.V.  
Roundup® ProVantage

Version: 1.1

Page: 2 / 8  
Effective date: 06.09.2016

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

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

Brown /Liquid / Amino odour

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Active ingredient**

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

**Composition**

Components	CAS No.	EC No.	EU Index No. / REACH Reg. No. / C&L ID No.	% by weight (approximate)	Classification
Potassium salt of glyphosate	70901-12-1	933-437-9	015-184-00-8 / - / 02-2119694167-27- 0000	44	Aquatic Chronic - Category 2; H411; { c}
Alkylpolyglycoside	68515-73-1	500-220-1	- / 01-2119488530-36 / -	<20	Eye damage/irritation - Category 1; H318; { d}
Nitrotyl	226563-63-9		- / - / -	<3	Acute toxicity - Category 4, Skin corrosion/irritation - Category 2, Eye damage/irritation - Category 1, Aquatic Chronic - Category 3; H302+332, 315, 318, 412
Water and minor formulating ingredients			- / - / -	>33	Not classified as dangerous.;

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. If there are persistent symptoms, obtain medical advice.

**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. 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, inhalation, eye contact, ingestion

**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.

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

- 4.2.2. **Medical conditions aggravated by exposure**  
None.

4.3. **Indication of any immediate medical attention and special treatment needed**

- 4.3.1. **Advice to doctors**  
This product is not an inhibitor of cholinesterase.

- 4.3.2. **Antidote**  
Treatment with atropine and oximes is not indicated.

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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**  
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. **Personal precautions**

Use personal protection recommended in section 8.

6.2. **Environmental precautions**

SMALL QUANTITIES: Low environmental hazard. LARGE QUANTITIES: Minimise spread.  
Keep out of drains, sewers, ditches and water ways. Notify authorities.

6.3. **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**

Avoid contact with eyes.  
When using do not eat, drink or smoke.  
Wash hands thoroughly after handling or contact.  
Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.  
Emptied containers retain vapour and product residue.  
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**7.2. Conditions for safe storage**

Minimum storage temperature: -15 °C

Maximum storage temperature: 50 °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: 5 years.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Airborne exposure limits**

Components	Exposure Guidelines
Potassium salt of glyphosate	No specific occupational exposure limit has been established.
Alkylpolyglycoside	No specific occupational exposure limit has been established.
Nitrotyl	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:**

If there is significant potential for contact: Wear chemical goggles.

**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.

**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:	Brown
Odour:	Amino odour
Form:	Liquid
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:	> 600 °C
Self-accelerating decomposition	No data.

MONSANTO Europe S.A./N.V.  
Roundup® ProVantage

Version: 1.1

Page: 5 / 8  
Effective date: 06.09.2016

temperature (SADT):	
Oxidizing properties:	No data.
Specific gravity:	1,3426 @ 20 °C / 4 °C
Vapour pressure:	No significant volatility; aqueous solution.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	107,2 mPa·s @ 20 °C
Kinematic viscosity:	79,83 cSt @ 20 °C
Density:	1,3426 g/cm <sup>3</sup> @ 20 °C
Solubility:	Completely miscible.
pH:	4,3 @ 10 g/l
Partition coefficient:	log Pow: -3,2 @ 25 °C (glyphosate)

## 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.

## 11. TOXICOLOGICAL INFORMATION

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

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

Data obtained on product and components are summarized below.

### Acute oral toxicity

Rat, LD<sub>50</sub>: > 2.000 mg/kg body weight  
No mortality.

### Acute dermal toxicity

Rat, LD<sub>50</sub>: > 2.000 mg/kg body weight  
No mortality.

### Skin irritation

Rabbit, 3 animals, OECD 404 test:  
Redness, individual EU scores: 0,3; 0,0; 0,0  
Swelling, individual EU scores: 0,0; 0,0; 0,0  
Days to heal: 5  
Essentially non irritating.

### Eye irritation

Rabbit, 3 animals, OECD 405 test:  
Conjunctival redness, individual EU scores: 0,7; 1,0; 0,7  
Conjunctival swelling, individual EU scores: 1,0; 1,0; 0,7  
Corneal opacity, individual EU scores: 0,0; 0,0; 0,0  
Iris lesions, individual EU scores: 0,0; 0,0; 0,0  
Days to heal: 3



MONSANTO Europe S.A./N.V.  
Roundup® ProVantage

Version: 1.1

Page: 6 / 8  
Effective date: 06.09.2016

Slightly irritating to eyes but not sufficient for classification.  
Moderate irritation.

## Skin sensitization

Guinea pig, 9-induction Buehler test:  
Negative.  
No skin sensitization

## Genotoxicity

Not genotoxic.

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

### Genotoxicity

Not genotoxic.

### Carcinogenicity

Not carcinogenic in rats or mice.

### Reproductive/Developmental Toxicity

Developmental effects in rats and rabbits only in the presence of significant maternal toxicity.  
Reproductive effects in rats only in the presence of significant maternal toxicity.

## 12. ECOLOGICAL INFORMATION

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

### Aquatic toxicity, algae/aquatic plants

Green algae (*Selenastrum capricornutum*):

Acute toxicity, 72 hours, static, ErC50 (growth rate): 118 mg/L

Duckweed (*Lemna gibba*):

Acute toxicity, 7 days, static, ErC50 (frond number): 74,3 mg/L

Duckweed (*Lemna gibba*):

Acute toxicity, 7 days, static, NOEC (growth rate): 19,1 mg/L

### Arthropod toxicity

Honey bee (*Apis mellifera*):

Contact, 48 hours, LD50: > 279 µg/bee

Honey bee (*Apis mellifera*):

Oral, 48 hours, LD50: > 282 µg/bee

### Soil organism toxicity, invertebrates

Earthworm (*Eisenia foetida*):

Acute toxicity, 14 days, LC50: > 10.000 mg/kg dry soil

### Soil organism toxicity, microorganisms

Nitrogen and carbon transformation test:

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

### Similar formulation

### Aquatic toxicity, fish

Rainbow trout (*Oncorhynchus mykiss*):

Acute toxicity, 96 hours, static, LC50: > 1.039 mg/L

### Aquatic toxicity, invertebrates

Water flea (*Daphnia magna*):

Acute toxicity, 48 hours, static, EC50: 243 mg/L

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

### Avian toxicity

Bobwhite quail (*Colinus virginianus*):

Acute oral toxicity, single dose, LD50: > 3.851 mg/kg body weight

### Bioaccumulation

MONSANTO Europe S.A./N.V.  
Roundup® ProVantage

Version: 1.1

Page: 7 / 8  
Effective date: 06.09.2016

**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

## **13. DISPOSAL CONSIDERATIONS**

### **13.1. Waste treatment methods**

#### **13.1.1. Product**

Keep out of drains, sewers, ditches and water ways. Follow all local/regional/national/international regulations on waste disposal. Follow current edition of the General Waste, Landfill, and Burning of Hazardous Waste Directives; and the Shipment of Waste Regulation. 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; and the Shipment of Waste Regulation. Do NOT re-use containers. Triple or pressure rinse empty containers. Pour rinse water into spray tank. Properly rinsed container can be disposed as a non hazardous industrial waste. Store for collection by approved waste disposal service. 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.

## **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

## **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 Regulation EC 1107/2009.

## **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.

This Safety Data Sheet has been prepared following the Regulation (EC) No. 1907/2006 (Annex II) as last amended by Regulation (EC) No. 2015/830



MONSANTO Europe S.A./N.V.  
Roundup® ProVantage

Version: 1.1

Page: 8 / 8  
Effective date: 06.09.2016

Data provided in this Safety Data Sheet are for the product as supplied unless otherwise indicated.

#### Classification of components

Components	Classification
Potassium salt of glyphosate	Aquatic Chronic - Category 2 H411 Toxic to aquatic life with long lasting effects.
Alkylpolyglycoside	Eye damage/irritation - Category 1 H318 Causes serious eye damage.
Nitroaryl	Acute toxicity - Category 4 Skin corrosion/irritation - Category 2 Eye damage/irritation - Category 1 Aquatic Chronic - Category 3 H302+332 Harmful if swallowed or if inhaled H315 Causes skin irritation. H318 Causes serious eye damage. H412 Harmful to aquatic life with long lasting effects.
Water and minor formulating ingredients	Not classified as dangerous.

#### 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), STOT SE (Specific Target Organ Toxicity, Single Exposure), STOT RE (Specific Target Organ Toxicity, Repeated Exposure), 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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