

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:

Greenforce Lawn Weedkiller

Product Number(s): P2242 (1L), P2241 (500mls) P40205 (1 L Dosser Bottle UK)

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Herbicide that controls all major lawn weeds. For professional use.

1.3. Details of the supplier of the safety data sheet:

Information about the manufacturer:

Hygeia Chemicals Limited

Carrowmoneash, Oranmore, Co. Galway H91WK8X

Ireland

Tel: 00353 91 794722

1.3.1. Responsible person:

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E-mail:

services@hygeia.ie

1.4. Emergency telephone number:

National Poisons Information Centre (NPIC)

353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).

Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008 (CLP):

Not considered as hazardous mixture.

Hazard statements: No hazard statements.

2.2. Label elements:

Hazard statements: No hazard statements.

Precautionary statements:

P101 – If medical advice is needed, have product container or label at hand.

P102 – Keep out of reach of children.

P103 – Read carefully and follow all instructions.

P261 – Avoid breathing mist.

P501 – Dispose of contents/container in a safe way.

EUH 210 – Safety data sheet available on request.

EUH 401 – To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards:

The product has no other known specific hazards for human or environment.

Results of PBT and vPvB assessment: Based on available data, the product does not contain any PBT or vPvB substances.

Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances:**
Not applicable.

3.2. **Mixtures:**

Hazardous ingredients:

Description	CAS number	EC number / ECHA list number	REACH registration number	Conc. (%)	Classification according to Regulation (EC) No 1272/2008 (CLP)		
					Pictogram, signal word code(s)	Hazard class and category code(s)	Hazard statement code(s)
Potassium; (2R)-2-(4-chloro-2-methylphenoxy) propanoate (CMPP-P)*	66423-05-0	680-228-0	-	1 – 10	GHS07 GHS05 GHS08 Danger	Acute Tox. 4 Eye Dam. 1 Aquatic Chronic 2	H302 H318 H411
Potassium 3,6-dichloro-o-anisate Index number: 607-044-00-5	10007-85-9	233-002-7	-	0 – 5	GHS07 Warning	Eye Irrit. 2 Aquatic Chronic 3	H319 H412
Potassium hydroxide (unreacted)** Index number: 019-002-00-8	1310-58-3	215-181-3	-	<0.5	GHS05 GHS07 Danger	Acute Tox. 4 Skin Corr. 1A	H302 H314

*: Classification specified by the manufacturer; the substance is not listed in Annex VI of the Regulation (EC) No 1272/2008.

**: Substance having occupational exposure limit value.

Specific concentration limits:

Potassium hydroxide (CAS: 1310-58-3):

Skin Corr. 1A; H314: $C \geq 5\%$

Skin Corr. 1B; H314: $2\% \leq C < 5\%$

Skin Irrit. 2; H315: $0,5\% \leq C < 2\%$

Eye Irrit. 2; H319: $0,5\% \leq C < 2\%$

For the full text of hazard statements, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. **Description of first aid measures:**

INGESTION:

Measures:

- If ingestion is suspected, do not induce vomiting.
- If conscious, drink plenty of water.
- Obtain medical attention immediately (show this Safety Data Sheet).

INHALATION:

Measures:

- Take the victim into fresh air.
- If there is breathing difficulty or coughing, keep patient at rest seated in position of maximum comfort.
- Obtain medical attention immediately (show this Safety Data Sheet).

SKIN CONTACT:

Measures:

- Remove contaminated clothing immediately.
- If skin contamination occurs wash immediately with plenty of clean, gently flowing water for at least 10 minutes.
- Repeat skin decontamination process until all signs of chemicals have gone.

EYE CONTACT:

Measures:

- Immediately wash out with plenty of water for at least 10 minutes maintaining eyelids open.
- Protect unharmed eye.
- Take care not to wash the chemical from one eye into the other.
- Obtain medical attention immediately (show this Safety Data Sheet).

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

The most important acute and delayed symptoms and effects are contained in Section 11.

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

Immediately wash eyes with water.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

5.1.1. Suitable extinguishing media:

Extinguish with carbon dioxide, dry chemical, foam or water spray.

5.1.2. Unsuitable extinguishing media:

No data available.

5.2. Special hazards arising from the substance or mixture:

In case of fire, smoke and other combustion products may be formed (toxic fumes of carbon dioxide and carbon monoxide); the inhalation of such combustion products can have serious adverse effects on health.

5.3. Advice for firefighters:

Chemical protection suit to prevent contact with skin and eyes, suitable gloves for fire-fighters, boots and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1. For non-emergency personnel:

Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.

6.1.2. For emergency responders:

Wear appropriate personal protective equipment (see Section 8).

6.2. Environmental precautions:

Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

6.3. Methods and material for containment and cleaning up:

Soak up with inert absorbent material, place in suitable labelled containers and dispose as hazardous waste. Where appropriate, refer to Sections 8 and 13.

6.4. Reference to other sections:

For further and detailed information see Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Observe conventional hygiene precautions.
Do not eat, drink, or smoke when using this product.
Avoid direct contact with the product.

Technical measures:

No special measures required.

Precautions against fire and explosion:

No special measures required.

7.2. Conditions for safe storage, including any incompatibilities:

Technical measures and storage condition:

Keep containers tightly closed in a dry, cool and well-ventilated place to which children do not have access.
Keep away from food, drink and animal feedstuff.

Incompatible materials: See Section 10.5.

Packaging material: No special prescriptions.

- 7.3. **Specific end use(s):**
 No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters:**

Occupational exposure limit values (2021 Code of Practice for the Safety, Health and Welfare at Work):
Potassium hydroxide (CAS: 1310-58-3): 15 minutes: 2 mg/m³

DNEL values		Oral exposure		Dermal exposure		Inhalative exposure	
		Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)
Consumer	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data
Worker	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data

PNEC values		
Compartment	Value	Note(s)
Freshwater	no data	no notes
Marine water	no data	no notes
Freshwater sediment	no data	no notes
Marine water sediment	no data	no notes
Sewage Treatment Plant (STP)	no data	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	no data	no notes

8.2. **Exposure controls:**

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1. **Appropriate engineering controls:**

In pursuance of work is proper foresight needed to avoid leaking onto clothes and floors and to avoid contact with eyes and skin.

8.2.2. **Individual protection measures, such as personal protective equipment:**

Observe the general safety regulations when handling chemicals.

Do not eat, drink, or smoke when using this product.

Shower or bathe at the end of working.

- Eye/face protection:** Use appropriate protective glasses/face protection (EN ISO 16321-1:2022; EN 166).
- Skin protection:**
 - Hand protection:** Use appropriate, chemically resistant protective gloves (EN 374).
 - Other:** Use appropriate protective clothing.
- Respiratory protection:** Use appropriate respiratory protective device.
- Thermal hazards:** No thermal hazards known.

8.2.3. **Environmental exposure controls:**

No specific prescription.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, an expert's advice is necessary before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Parameter	Value / Test method / Remarks
1. Physical state	liquid
2. Colour	clear, brown
3. Odour, odour threshold	slight phenolic
4. Melting point/freezing point	not applicable, aqueous solution
5. Boiling point or initial boiling point and boiling range	no data*
6. Flammability	not applicable, aqueous solution
7. Lower and upper explosion limit	no data*
8. Flash point	no data*
9. Auto-ignition temperature	no data*
10. Decomposition temperature	no data*
11. pH	7 – 10
12. Kinematic viscosity	no data*
13. Solubility in water in other solvents	soluble no data*
14. Partition coefficient n-octanol/water (log value)	CMPP-P: Log Pow = -0.39 @ pH 7
15. Vapour pressure	no data*
16. Density and/or relative density	1.022 g/ml @ 20°C (typical)
17. Relative vapour density	no data*
18. Particle characteristics	no data*

9.2. Other information:

9.2.1. Information with regard to physical hazard classes:

No further data available or not applicable for the product.

9.2.2. Other safety characteristics:

No other characteristics available.

*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet, or the property is not applicable for the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Stable under recommended transport or storage conditions.

10.2. Chemical stability:

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions:

No hazardous reactions known.

10.4. Conditions to avoid:

Avoid direct heat protect from frost.

10.5. Incompatible materials:

Avoid strong acids, strong bases and oxidising agents.

10.6. Hazardous decomposition products:

May generate toxic fumes of carbon dioxide and carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: Based on available data, the classification criteria are not met.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.1.1. **Summaries of the information derived from the test conducted:**

No data available.

11.1.2. **Relevant toxicological properties:**

No data available about the product.

Information about the components:

Potassium; (2R)-2-(4-chloro-2-methylphenoxy)propanoate (CAS: 66423-05-0):

Acute toxicity:

LD₅₀ (oral, rat): 500 – 2000 mg/kg (Harmful if swallowed.)

LD₅₀ (dermal, rat): >2000 mg/kg

LC₅₀ (inhalation, rat): ≥5.4 mg/l/4 hours

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: No symptoms.

Delayed/immediate effects: Immediate effects can be expected after short-term exposure.

Potassium hydroxide (CAS: 1310-58-3):

Acute toxicity:

LD₅₀ (oral, rat): 273 mg/kg (Strong caustic effect.)

Eyes: Strong caustic effect.

Skin: Strong caustic effect.

Sensitization: None known.

11.1.3. **Information on likely routes of exposure:**

Ingestion, inhalation, skin contact, eye contact.

11.1.4. **Symptoms related to the physical, chemical and toxicological characteristics:**

No data available.

11.1.5. **Delayed and immediate effects as well as chronic effects from short and long-term exposure:**

There are no important acute and delayed symptoms and effects known.

11.1.6. **Interactive effects:**

No data available.

11.1.7. **Absence of specific data:**

No information.

11.2. Information on other hazards:

Endocrine disrupting properties:

Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

Other information:

No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

The mixture is not classified as hazardous for the environment.

Information about the components:

Potassium; (2R)-2-(4-chloro-2-methylphenoxy)propanoate (CAS: 66423-05-0):

NOEC (Daphnia magna): 22.2 mg/l

ErC₅₀ (Lemna minor): 1.6 mg/l/72 or 96 hours

ErC₅₀ (Pseudokirchneriella subcapitata): 16.2 mg/l/72 or 96 hours

LC₅₀ (Oncorhynchus mykiss): >100 mg/l/96 hours

NOEC (Oncorhynchus mykiss): >50 mg/l

EC₅₀ (Daphnia magna): >91 mg/l/48 hours

EC₅₀ (Lemna gibba): 1.6 mg/l/14 days

Potassium hydroxide (CAS: 1310-58-3):

LC₅₀ (Gambusia affinis): 80 mg/l/96 hours

12.2. Persistence and degradability:

Information about the components:

Potassium; (2R)-2-(4-chloro-2-methylphenoxy)propanoate (CAS: 66423-05-0):

Rapidly biodegradable.

Potassium hydroxide (CAS: 1310-58-3):

Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential:

Information about the components:

Potassium; (2R)-2-(4-chloro-2-methylphenoxy)propanoate (CAS: 66423-05-0):

Potential for bioaccumulation is low based on log Pow.

Potassium hydroxide (CAS: 1310-58-3):

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

12.4. Mobility in soil:

Information about the components:

Potassium; (2R)-2-(4-chloro-2-methylphenoxy)propanoate (CAS: 66423-05-0):

Fairly mobile but rapidly degraded in aerobic soils.

Potassium hydroxide (CAS: 1310-58-3):

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralized.

12.5. Results of PBT and vPvB assessment:

Based on available data, the product does not contain any PBT or vPvB substances.

Information about the components:

Potassium; (2R)-2-(4-chloro-2-methylphenoxy)propanoate (CAS: 66423-05-0):

This substance is not identified as a PBT substance

Potassium hydroxide (CAS: 1310-58-3):

Not applicable.

12.6. Endocrine disrupting properties:

Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

12.7. Other adverse effects:

Information about the components:

Potassium hydroxide (CAS: 1310-58-3):

Water hazard class (WGK, German regulation, self-classification): 1 – slightly hazardous for water.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:

Disposal according to the local regulations.

13.1.1. Information regarding the disposal of the product:

Dispose of in accordance with applicable regulations.

List of Waste Code:

No waste disposal key according to the List of Waste Code (LoW code) can be determined for this product, as only the purpose of application defined by the user enables an allocation. The LoW code number has to be determined after a discussion with a waste disposal specialist.

13.1.2. Information regarding the disposal of the packaging:

Triple rinse containers with water and dispose of according to local and national regulations.

- 13.1.3. **Physical/chemical properties that may affect waste treatment options shall be specified:**
No data available.
- 13.1.4. **Sewage disposal:**
No data available.
- 13.1.5. **Special precautions for any recommended waste treatment:**
No data available.

SECTION 14: TRANSPORT INFORMATION

ADR/RID; ADN; IMDG; IATA:
Not subject to the conventions of carriage of dangerous goods.

- 14.1. **UN number or ID number:**
No UN Number.
- 14.2. **UN proper shipping name:**
No proper shipping name.
- 14.3. **Transport hazard class(es):**
No transport hazard classes.
- 14.4. **Packing group:**
No packing group.
- 14.5. **Environmental hazards:**
No relevant information available.
- 14.6. **Special precautions for user:**
No relevant information available.
- 14.7. **Maritime transport in bulk according to IMO instruments:**
Not applicable.

SECTION 15: REGULATORY INFORMATION

- 15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture:**

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No 91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

REGULATION (EC) No 1107/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives (EEC) No 79/117 and (EEC) No 91/414

COMMISSION REGULATION (EU) No 547/2011 of 8 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards labelling requirements for plant protection products

- 15.2. **Chemical safety assessment:** No information.

SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet: No information.

Literature references / data sources:

Safety data sheet issued by the supplier (08. 01. 2020, version 2)

Methods used for the classification according to Regulation (EC) No 1272/2008:

The classification of the product has been given by the downstream user who knows the exact composition of the product. In Section 3 the weight percentages are given in ranges because of the confident nature of the exact composition.

Relevant hazard statements (code and full text) of Sections 2 and 3:

H302 – Harmful if swallowed.

H314 – Causes severe skin burns and eye damage.

H315 – Causes skin irritation.

H318 – Causes serious eye damage.

H319 – Causes serious eye irritation.

H411 – Toxic to aquatic life with long lasting effects.

H412 – Harmful to aquatic life with long lasting effects.

EUH 210 – Safety data sheet available on request.

EUH 401 – To avoid risks to human health and the environment, comply with the instructions for use.

Training advice: No data available.

Full text of the abbreviations in the safety data sheet:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate.

AOX: Adsorbable organic halides.

BCF: Bioconcentration factor.

BOD: Biological Oxygen Demand.

CAS number: Chemical Abstract Service number.

CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

CMR effects: Carcinogenic, mutagenic, reprotoxic effects.

COD: Chemical Oxygen Demand.

CSA: Chemical Safety Assessment.

CSR: Chemical Safety Report.

DNEL: Derived-No-Effect-Level.

ECHA: European Chemical Agency.

EC: European Community.

EC number: EINECS and ELINCS numbers (see also EINECS and ELINCS).

EEC: European Economic Community.

EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

EN: European Norm.

EU: European Union.

EuPCS: European Product Categorisation System.

EWC: European Waste Catalogue (replaced by LoW – see below).

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

IATA: International Air Transport Association.

ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

IMO: International Maritime Organization.

IMSBC: International Maritime Solid Bulk Cargoes.

IUCLID: International Uniform Chemical Information Database.

IUPAC: International Union of Pure and Applied Chemistry.

Kow: n-Octanol - Water Partition Coefficient.

LC50: Lethal concentration resulting in 50 % mortality.

LD50: Lethal dose resulting in 50 % mortality (median lethal dose).

LoW: List of Waste.

LOEC: Lowest Observed Effect Concentration.

LOEL: Lowest Observed Effect Level.

NOEC: No Observed Effect Concentration.
NOEL: No Observed Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
OECD: Organization for Economic Cooperation and Development.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic.
PNEC: Predicted No Effect Concentration.
QSAR: Quantitative Structure Activity Relationship.
REACH: Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.
SCBA: Self Contained Breathing Apparatus.
SDS: Safety Data Sheet.
STOT: Specific Target Organ Toxicity.
SVHC: Substances of Very High Concern.
UN: United Nations.
UVCB: Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials.
VOC: Volatile Organic Compound.
vPvB: very Persistent and very Bioaccumulative.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.

The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information.

The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.

Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product.

It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by:
MSDS-Europe
International branch of ToxInfo Kft.

Professional help regarding the explanation of
the safety data sheet:
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