

**Section 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product Name: Greenforce Lawn Weedkiller
Product Number(s): P2242 (1L)

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

Control all major lawn weeds

1.3 Details of the supplier of the safety data sheet

Hygeia Chemicals Limited, Carrowmoneash, Oranmore, Co. Galway
Tel: 091-794722 Fax: 091-794738 email: services@hygeia.ie

1.4 Emergency telephone number

National Poisons Information Centre (Tel: 01-8379964) (Fax: 01-8368476)

Section 2: Hazards Identification**2.1 Classification according to Regulation (EC) 1272/2008 [EU-GHS/CLP]**

Not Classified

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008 (CLP):**

Hazard pictogram: Not Classified
Signal words: Not Classified
Hazard statements: Not Classified
Precautionary statements: P101: If medical advice is needed, have product container or label at hand
P102: Keep out of reach of children
P103: Read label before use
P501: Dispose of contents/container in a safe way
P261: Avoid breathing mist

2.3 Other hazards

Not available

Section 3: Composition/information on ingredients**3.1 Substances**

Not available

3.2 Mixtures

Name	No.	Classification	% Wt.
(R) and (S)-2-(4-Chloro-2-methylphenoxy) propionic acid, potassium salt	CAS No: 66423-05-0 EINECS: 240-539-0	H302 Acute Tox. 4; H318 Eye Dam. 1; H411 Aquatic Chronic 2	1-10%
3,6-dichloro-2-methoxybenzoic acid (Dicamba)	CAS No: 1918-00-9 EINECS: 217-635-6	H302 Acute Tox. 4; H332 Acute Tox. 4; H318 Eye Dam 1; H411 Aquatic Chronic 2	0-5%
Potassium hydroxide	CAS No: 1310-58-3 EINECS: 215-181-3	H302 Acute Tox. 4; H314 Skin Corr. 1A	0-0.5%

Section 4: First Aid Measures

4.1 Description of First Aid Measures

Eye Contact: If substance has got into the eyes, 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)

Skin Contact: 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.

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

Inhalation: Move to 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)

4.2 Most important symptoms and effects, both acute and delayed

Not available

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

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

5.2 Special hazards arising from the substance or mixture

May give off toxic fumes in a fire

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**
Wear appropriate protective clothing (see Section 8)
- 6.2 Environmental precautions**
Do not allow product to enter drains or water courses
- 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**
Refer to Sections 8 and 13

Section 7: Handling and Storage

- 7.1 Precautions for safe handling**
When using, do not eat, drink or smoke. Avoid direct contact with the substance
- 7.2 Conditions for safe storage, including any incompatibilities**
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
- 7.3 Specific end use(s)**
Not Available

Section 8: Exposure Controls/Personal Protection

- 8.1 Control Parameters**
- Occupational Exposure Standards:**
- | Chemical Name | National Occupational Exposure Limits |
|---|---|
| (R)-2-(4-Chloro-2-methylphenoxy) propionic acid, potassium salt | WEL (8 hr TWA): 10 mg/m ³
WEL (15 min STEL): 20 mg/m ³ |
| 3,6-dichloro-2-methoxy benzoic acid, potassium salt | OEL: 10 mg/m ³ |
| Potassium hydroxide | WEL (15 min STEL): 2 mg/m ³ |
- 8.2 Exposure Controls**
- Engineering Control Measures:** The usual precautionary measures for handling chemicals should be observed
- Hygiene Measures:** When using do not eat, drink or smoke. Shower or bathe at the end of working
- Respiratory Protection:** Wear suitable respiratory equipment
- Skin and Body:** Wear suitable protective clothing
- Hands:** Wear chemical resistant gloves
- Eyes:** Wear suitable eye/face protection

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear brown liquid
Odour:	Slight Phenolic
pH:	(9.6 – 11.5)
Specific Gravity:	1.022 g/ml @ 20°C (typical)
Boiling Point:	No data available
Melting Point/Range:	Not applicable, aqueous solution
Decomposition Temp.:	No data available
Flash Point:	No data available
Auto Ignition Temp.:	No data available
Flammability:	Not applicable, aqueous solution
Explosive Properties:	No data available
Oxidising Properties:	No data available
Vapour Pressure:	No data available
Bulk Density:	Not applicable, aqueous solution
Solubility (Water):	Soluble in water
Solubility (Fat Solvent):	No data available
Partition Coefficient:	(CMPP-P) Log P_{ow} = -0.39 @ pH 7 (Dicamba) Log P_{ow} = -1.9 (Octanol/Water 25°C; pH 8.9)
Viscosity:	No data available

9.2 Other information

Not Available

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

Not Available

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 toxicological effects

CMPP-P K 600 g/l AI

Acute Toxicity:

Ingestion:

LD₅₀/oral/rat = 500-2000 mg/kg. Harmful if swallowed

Skin Contact:

LD₅₀/dermal/rat > 2000 mg/kg

Inhalation:

LC₅₀/inhalation/4h/rat = > 5.4 mg/l

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

Dicamba Technical (≥ 97% w/w)

Acute Toxicity:	LD ₅₀ /oral/rat 1581 mg/kg LD ₅₀ /dermal/rat >2000 mg/kg LC ₅₀ /inhalation/4h/rat 4.46 mg/l air
Eye Irritation:	Severely irritating
Skin Irritation:	Mildly irritating
Sensitization:	Not skin sensitising
Mutagenic/Carcinogenic/ Teratogenicity/Reproductive/STOT:	Negative

Potassium Hydroxide

Toxicity:	LD ₅₀ /oral/rat = 273 mg/kg. Strong caustic effect
Inhalation:	No data available
Eye:	Strong caustic effect
Skin:	Strong caustic effect
Sensitization:	None known
Mutagenic/Carcinogenic/ Teratogenicity/Reproductive/STOT:	No data available

Section 12: Ecological Information

12.1 Toxicity

Dicamba Technical

Toxicity to Fish:	LC ₅₀ Oncorhynchus mykiss (Rainbow Trout) 135.4 mg/l, 96h
Toxicity to Aquatic Invertebrates:	EC ₅₀ Daphnia magna (Water Flea) 110.7 mg/l, 48h
Toxicity to Aquatic Plants:	EbC ₅₀ Anabaena flos-aquae (Bluegreen algae) 43.1 mg/l, 72h ErC ₅₀ Anabaena flos-aquae (Bluegreen algae) 44.9 mg/l, 72h NOEC Lemna gibba (Duckweed) 0.25 mg/l, 14d
Toxicity to Bacteria:	IC ₅₀ activated sewage sludge >500 mg/l, 3h

12.2 Persistence & Degradability

Biodegradability:	Not readily biodegradable
Stability in Water:	Degradation half life: 35 - 46 d. Not persistent in water
Stability in Soil:	Degradation half life: 1.4 - 11 d. Not persistent in soil

12.3 Bioaccumulative Potential

Dicamba has low potential for bioaccumulation

12.4 Mobility

Dicamba has very high mobility in soil

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)
This substance is not considered to be very persistent nor very bioaccumulating (vPvB)

12.6 Other Adverse Effects

None known

Potassium Hydroxide

Aquatic Toxicity: LC₅₀ (96h) 80 mg/l (Gambusia affinis)

12.2 Persistence & Degradability

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

12.3 Bioaccumulative Potential

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

12.4 Mobility

Water hazard class 1 (German Regulation) (Assessment by list): Slightly hazardous for water
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

PBT: Not applicable

vPvB: Not applicable

12.6 Other Adverse Effects

No further relevant information available

CMPP-P K 600 g/l AI

Species	Test	Value	Units
Daphnia magna	NOEC	22.2	mg/l (MCPP-p)
Lemna minor	72h or 96h ErC ₅₀	1.6	mg/l (MCPP-p)
Pseudokirchneriella subcapitata	72h or 96h ErC ₅₀	16.2	mg/l (MCPP-p)
Rainbow Trout (Oncorhynchus mykiss)	96h LC ₅₀	>100	mg/l (MCPP-p)
Rainbow Trout (Oncorhynchus mykiss)	NOEC	>50	mg/l (MCPP-p)
Daphnia magna	48h EC ₅₀	>91	mg/l (MCPP-p)

12.2 Persistence & Degradability

Rapidly biodegradable

12.3 Bioaccumulative Potential

Potential for bioaccumulation is low based on log Pow

12.4 Mobility

Fairly mobile but rapidly degraded in aerobic soils

12.5 Results of PBT and vPvB assessment

This substance is not identified as a PBT substance

12.6 Other Adverse Effects

Lemna gibba 14 day EC₅₀ 1.6 mg/l

Section 13: Disposal Considerations

13.1 Waste treatment methods

Product Disposal: Dispose of according to local and national regulations

Container Disposal: Triple rinse containers with water and dispose of according to local and national regulations

Section 14: Transport Information

Not classified as hazardous for road transport under ADR

- 14.1 UN number**
- 14.2 UN proper shipping name**
- 14.3 Transport hazard class(es)**
- 14.4 Packing group**
- 14.5 Environmental hazards**
- 14.6 Special precautions for user**
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Section 15: Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No data available
- 15.2 Chemical safety assessment**
No data available

Section 16: Other Information

Text of Phrases mentioned in Sections 2 and 3:

H-Statements

- H302** Harmful if swallowed
- H314** Causes severe skin burns and eye damage
- H315** Causes skin irritation
- H318** Causes serious eye damage
- H411** Toxic to aquatic life with long lasting effects
- H315** Causes skin irritation
- H412** Harmful to aquatic life with long lasting effects
- H332** Harmful if inhaled

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, release and is not to be considered a warranty of quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text