



SAFETY DATA SHEET

Green Force Lawn Feed Weed & Moss Killer

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NO. GFLW875

APPLICATION Lawn Feed, Weed & Moss killer

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2 HAZARDS IDENTIFICATION

Xi - Irritant
R41- Risk of serious damage to eyes.
R52 - Harmful to aquatic organisms.
R53 - May cause long-term adverse effects in the aquatic environment.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No	Class	Weight
(R) and (S)-2-(4-Chloro-2-methyl phenoxy) propionic acid, potassium salt(CMPP-P K)	240-539-0	66423-05-0	Xn; R22 X; R41 N; R51/53	0 - 0.5%
3,6-dichloro-2-methoxy benzoic acid (Dicamba)	217-635-6	1918-00-9	Xn; Xi; R22, R41, R52/53	0 - 0.05%
Potassium hydroxide	215-181-3	1310-58-3	C; R22, R35	0 - 0.03%
Ferrous Sulphate	2317535	7782-63-0	Xn; R22	10 - 20%

4 FIRST AID MEASURES

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).

INGESTION

If ingestion is suspected, 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. Obtain medical attention (show this Safety Data Sheet).

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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).

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

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

UNSUITABLE EXTINGUISHING MEDIA

None known.

SPECIAL HAZARDS OF PRODUCT

May give off toxic fumes in a fire.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

As for all fires involving chemicals: chemical protection suit, suitable gloves for firefighters, boots and self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear appropriate protective clothing (see section 8).

ENVIRONMENTAL PRECAUTIONS

Do not allow product to enter drains or water courses.

SPILL CLEAN UP METHODS

Sweep up and place in suitable labelled containers and dispose as hazardous waste. Where appropriate refer to Sections 8 & 13.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

When using do not eat, drink or smoke.

STORAGE PRECAUTIONS

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

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	STD	TWA – 8 Hrs		STEL – 15 Min		Notes
(R)-2-(4-Chloro-2-methylphenoxy) Propionic acid, potassium salt	WEL		10mg/m ³		20mg/m ³	
3,6-dichloro-2-methoxy benzoic acid, potassium salt	OEL		10mg/m ³			
Potassium hydroxide	WEL				2 mg/m ³	
Ferrous Sulphate	None assigned in current Irish edition of 2002 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001.					

WEL – Workplace Exposure Limit

ENGINEERING MEASURES

The usual precautionary measures for handling chemicals should be observed.

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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.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Brown/beige Granule	
ODOUR	Slight	
pH	No data available	
BOILING POINT	No data available	
MELTING POINT/RANGE	No data available	
DECOMPOSITION TEMP	No data available	
FLASH POINT	No data available	
AUTO IGNITION TEMP	No data available	
FLAMMABILITY (solid, gas)	No data available	
EXPLOSIVE PROPERTIES	None known	
OXIDISING PROPERTIES	None known	
VAPOUR PRESSURE		
BULK DENSITY		
SOLUBILITY	Water Solubility:	Soluble
	Fat/Solvent Solubility:	No data available
Partition Coefficient:	(CMPP-P)	Log P_{ow} = -0.39
	(Ferrous Sulphate)	Log P_{ow} = -3.32 (n-Octanol/Water)
	(Dicamba)	Log P_{ow} = 0.7 (Water), Log P_{ow} = -1.9 Buffer Ph7)

10 STABILITY AND REACTIVITY

STABILITY

Stable under recommended storage conditions. Ferrous Sulphate loses water in dry air and oxidizes upon exposure to moisture forming a brown coating of extremely corrosive basic ferric sulphate.

CONDITIONS TO AVOID

Avoid direct heat. Protect from frost.

MATERIALS TO AVOID

Avoid strong acids, strong bases and oxidising agents.

HAZARDOUS DECOMPOSITION PRODUCTS

May generate toxic fumes of carbon dioxide, carbon monoxide and sulphur oxides.

11 TOXICOLOGICAL INFORMATION

Information on Ferrous Sulphate

Acute Toxicity

- Oral

Large doses in humans may cause severe liver damage. Children are more susceptible than adults to iron poisoning.
LD ₅₀ Oral rat (anhydrous ferrous sulphate) 319 mg/kg.

- Inhalation:

No standard test data available. Iron salts are subject to OEL (See Section 8).

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- Skin:	No standard test data available, however ferrous sulphate has been widely used for many years and there is no evidence of acute toxicity associated with skin exposure.
Corrosivity/Irritation:	
- Eye:	Sulphuric acid content is below irritant classification level but the mildly acidic particle may still cause eye irritation.
- Skin:	Unlikely to cause irritation to the skin but may cause discolouration.
- Respiratory Tract:	No standard test data available, however ferrous sulphate has been widely used for many years and there is no evidence of respiratory tract corrosivity/irritation.
Sensitisation:	
- Skin:	Not sensitising based on mouse local lymph node assay.
- Respiratory Tract:	No standard test data available, however ferrous sulphate has been widely used for many years and there is no evidence of respiratory tract sensitisation.
Repeated Dose Toxicity:	No standard test data available, however ferrous sulphate has been used as an iron supplement for humans for many years.
Mutagenicity:	No evidence of mutagenicity. Maternal toxicity, NOAEL rat 10 day 160 mg/kg.
Carcinogenicity:	The lack of epidemiological evidence over the long use of ferrous sulphate implies that ferrous sulphate is not carcinogenic.
Reproductive Toxicity:	No evidence of reproductive toxicity.

Information on CMPP-P K 600 g/l AI

Acute Toxicity:	IHL Rat LC ₅₀ >5.4 mg/l. ORL Rat LD ₅₀ 500-2000 mg/kg. SKN Rat LD ₅₀ >2000 ml/kg.
Hazardous Ingredients:	Potassium Hydroxide: ORL Rat LD ₅₀ 273 mg/kg.
Routes of Exposure:	Refer to Section 4 of SDS for routes of exposure and corresponding symptoms.

Information on Dicamba

Acute Oral Toxicity:	LD ₅₀ : 1707 mg/kg (rat)	OECD 401
Acute Dermal Toxicity:	LD ₅₀ : >2000 mg/kg (rat)	OECD 402
Acute Inhalation Toxicity:	LC ₅₀ : 4.46 mg/l (rat; 4 h; male)	OECD 403
Acute Skin Irritation:	non irritant (rabbit; assessment according to 2001/59/EC)	OECD 404
Acute Eye Irritation:	highly irritant (rabbit; assessment according to 2001/59/EC)	OECD 405
Skin Sensitization:	not sensitizing (guinea pig; assessment according to 2001/59/EC; Maximization test)	OECD 406

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Mutagenic Potential in Vitro:	negative (Ames test)	OECD 471
	negative (cytogenetic test; CHO cells)	OECD 473
	negative (gene mutation test; lymphoma cells)	OECD 476
Mutagenic Potential in Vivo:	negative (mouse; micronucleus test)	OECD 474

12 ECOLOGICAL INFORMATION

Information on Ferrous Sulphate

Ecotoxicity:	Rainbow Trout (<i>Onchorhynchus mykiss</i>) 96h LC ₅₀ (OECD 203) 82.3 mg/l.
Mobility:	Soluble in water. Ferrous sulphate has a high mobility in soil and sediments (based on partition coefficient results).
Persistence & Degradability:	Product is inorganic and therefore non biodegradable, but will degrade as a result of hydrolysis.
Bioaccumulative Potential:	Octanol/water partition coefficient (P _{ow}) indicates that ferrous sulphate has a very low bioaccumulative potential.
Other Adverse Effects:	None known.

Information on CMPP-P K 600 g/l AI

Ecotoxicity:	Algae 72h IC ₅₀ 204 mg/l (MCP-P DMA). Daphnia 48h EC ₅₀ 272 mg/l (MCP-P DMA). Fish Rainbow Trout 96h LC ₅₀ 127 mg/l (MCP-P DMA).
Mobility:	Fairly mobile, but rapidly degraded in aerobic soils.
Persistence & Degradability:	Rapidly biodegradable.
Bioaccumulative Potential:	Potential for bioaccumulation is low based on Log P _{ow} .
Other Adverse Effects:	Toxic to aquatic organisms.

Information on Dicamba

Acute Toxicity to Fish:	LC ₅₀ : 135.4 mg/l (<i>Salmo gairdneri</i> (Rainbow trout); 96 h)	
	LC ₅₀ : 135.3 mg/l (<i>Lepomis macrochirus</i> (Bluegill); 96 h)	
Growth Inhibition, Algae: Selenastrum capricornutum (green algae); 72 h	EbC ₅₀ : >3.7 mg/l	EPA/FIFRA 123-2
	Anabaena flos-aquae (bluegreen algae); 72 h	EbC ₅₀ : 43.14 mg/l
Navicula pelliculosa (freshwater diatom); 72 h	ErC ₅₀ : 44.85 mg/l	
	EbC ₅₀ : 2.1 mg/l	EPA/FIFRA 123-2
Lemna gibba (duckweed); 14 day(s)	EC ₅₀ : >3.8 mg/l	EPA/FIFRA 123-2
Myriophyllum spicatum (Eurasian watermilfoil); 26 day(s)	EC ₅₀ : >0.45 mg/l (Static conditions)	
Toxicity to Aquatic Invertebrates:	EC ₅₀ : 110.7 mg/l (<i>Daphnia magna</i> (water flea); 48 h)	
Toxicity to Bacteria:	IC ₅₀ : >500 mg/l (act. sewage sludge; 3 h)	OECD 209
Toxicity to Birds:	LD ₅₀ : 216 mg/kg (bobwhite quail)	EPA 71-1

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13 DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL

Dispose of according to local and national regulations.

CONTAINER DISPOSAL

Dispose of according to local and national regulations.

14 TRANSPORT INFORMATION

Not classified as hazardous for road transport under ADR.

15 REGULATORY INFORMATION

CONTAINS

Dicamba, Mecoprop-p and Ferrous Sulphate as a granule.

LABELLING



Xi - Irritant

RISK PHRASES

R41- Risk of serious damage to eyes.

R52 - Harmful to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES(S)

S1 - Keep locked up.

S2 - Keep out of reach of children.

S13 - Keep away from food drink and animal feeding stuff.

S20 - When using do not eat or drink.

S21 - When using do not smoke.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S29 - Do not empty into drains.

S39 - Wear eye/face protection.

S46 - If swallowed seek medical advice immediately and show this container or label.

S56 - Dispose of any unused product in its container at a household waste site (civic amenity site). Contact your local council (local authority) for details. Dispose of empty container in the dustbin.

16 OTHER INFORMATION

Text of R Phrases

mentioned in Section 2:

R22 - Harmful if swallowed.

R35 - Causes severe burns.

R41 - Risk of serious damage to eyes.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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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 a 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.