



# agriculture, forestry & fisheries

Department:  
Agriculture, Forestry and Fisheries  
REPUBLIC OF SOUTH AFRICA

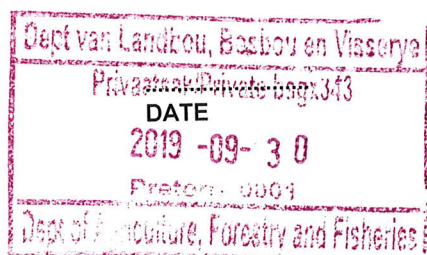
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## **CERTIFICATE OF REGISTRATION: FERTILIZER**

### **GROUP III FERTILIZER**

FERTILIZER, FARM FEEDS, AGRICULTURAL REMEDIES AND STOCK REMEDIES ACT, 1947 (ACT NO. 36 OF 1947)

1. This is to certify that the fertilizer mentioned below and the label attached hereto comply with the requirements of Act No. 36 of 1947 and the regulations promulgated there-under and that it has been registered by me:
  - 1.1 Registration Number awarded.....**M 85**
  - 1.2 Name Fertilizer.....**Ecofarma Fulgro CAAN**
  - 1.3 Name of applicant:.....**Ecofarma Southern Africa (Pty) Ltd**
  - 1.4 Type of product.....
  - 1.5 Customs tariff code.....
2. This registration is subject to the following conditions:
  - 2.1 That the registration is only valid for three (3) years and must be renewed **30 September 2022**
  - 2.2 That only facsimiles of the attached approved label may be used.
  - 2.3 The type and container size must conform to the sizes as stated in paragraph 6 on page 4 of the application form.
  - 2.4 That the container in which the fertilizer is offered for transport shall conform to the applicable packaging specifications as laid down by SABS Code of Practice 0229.
  - 2.5 That if the source of active ingredient is changed the Registrar must be informed in writing.
  - 2.6 That the printed labels, cartons, pamphlets and package inserts be submitted within 2 (two) months from the date of registration in duplicate.
  - 2.7 That all adverse effects, including adverse reactions, toxicity, misuse, formulation deviation or any other undesirable effect caused by this product must be reported immediately to the Registrar: Act No. 36 of 1947 by the registration holder.
3. The granting of this registration does not exempt anybody from the requirements of any other Law.



REGISTRAR: ACT NO. 36 OF 1947/

**ECOFARMA SOUTHERN AFRICA (PTY) LTD****ECOFARMA FULGRO CAAN****FERTILIZER GROUP 3**

Registration number M.....Act 36 of 1947

REGISTERED PLANT NUTRIENT CONTENT	
Nitrogen	148.9 g/kg
Fulvic Acid	9.9 g/kg

C 37 g/kg  
SG 1.36 (@20°C)  
pH 0.79

Application Rate: 125 Litres/Ha

**VOLUME/MASS: 25L , 1000L**

Store in tightly closed original container in a well-ventilated place

**Ecofarma Southern Africa (Pty) Ltd**

Reg. No.: 2016/388451/07

Unit 3 Pretoria Industrial Park, 50 Delfos Road

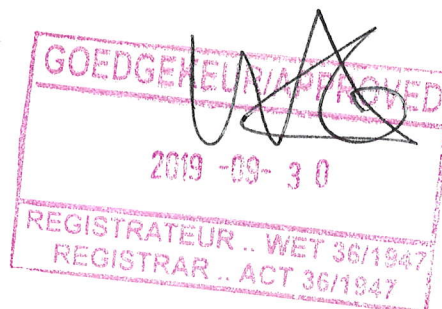
Pretoria Industrial, Tshwane, RSA

Tel. no. 064 727 7927

E-mail: info@ecofarma.co.za

BATCH NO \_\_\_\_\_

DATE OF MANUFACTURE \_\_\_\_\_



**ANNEXURE C**  
**DEPARTMENT OF AGRICULTURE**  
**CONFIDENTIAL**

FERTILIZERS, FARM FEEDS, AGRICULTURAL REMEDIES AND  
STOCK REMEDIES ACT, 1947  
Registrar: Act 36 of 1947  
Agriculture Place, 20 Beatrix Street, Pretoria  
Private Bag X343, Pretoria, 0001

**APPLICATION FOR REGISTRATION OF A FERTILIZER**

**TO BE COMPLETED IN DUPLICATE**

**1. Applicant**

1.1 Name of applicant: Ecofarma Southern Africa (Pty) Ltd

1.2 Registration number of company: 2016/388451/07

**2. Address of applicant**

2.1 Postal address: 149 Industrial Road, Kaya Sand, Johannesburg

2.2 Postal code: 2163

2.3 Street address: Unit 3, Pretoria Industrial Park, 50 Delfos Rd, Pretoria Industrial, Tshwane

2.4 Dialling code:

Telephone number: 064 727 7927

Fax number:

E-mail: info@ecofarma.co.za

2.5	Indicate the following: Is the applicant the	Importer:
		Manufacturer: X
		Seller: X

**3. Manufacture and formulation**

3.1 Name of manufacturer: Ecofarma Southern Africa (Pty) Ltd

3.2 Postal address: 149 Industrial Road, Kaya Sand, Johannesburg

3.3 Postal code: 2163

3.4 Physical address (Street address): Unit 3, Pretoria Industrial Park, 50 Delfos Rd, Pretoria Industrial, Tshwane



3.5 Dialling code:

Telephone number: 064 727 7927

Fax number:

E-mail: info@ecofarma.co.za

(if more than one manufacturing point for this product, indicate this on a separate annexure.)

3.6 Sterilizing plant (Where applicable): \_\_\_\_\_

Registration number: \_\_\_\_\_

3.7 Initials and surname(s) of person(s) responsible for formulations:

Mr PV Mashele

3.8 Qualifications: Pr. Sci. Nat.(Soil Science)

3.9 Professional registration number: SACNASP 114298

#### 4. Particulars of product

4.1 Trade mark (acknowledged or registered in terms of the Trade Marks Act (Act 62 of 1963) (if any)): no

4.2 Trade Name: **Ecofarma Fulgro CAAN**

4.3 How will the product be sold:

Bulk	: 1000 Litres
Containers	:X

4.4 Type and size of container

Polyprop Bag	:
Plastic Bag	:
Drum	: 25 litres
Glass Bottle	:
Plastic Bottle	:
Other (specify)	:

4.5 Registration number if previously registered: no






5. Product and formulation details

PRODUCT 7:

Ecofarma Fulgro CAAN

COMPOSITION:

g/kg
Ammonium Nitrate N 148.9 g/kg
Fulvic Acid 9.9 g/kg
C 37 g/kg
pH 0.79
SG 1.362

RAW MATERIAL INFORMATION				%	PRODUCT COMPOSITION (g/kg) or (mg/kg for micro-elements)											
Constituent	Reg. Nr.	Plant nutrient content %		USED	N	P	K	S	C	M	Zn	Cu	Mn	Fe	B	Mo
									a	g						
Ecofarma Fulgro CAAN		N	14.89	100	148.9											
TOTAL				100	148.9											

Fulvic Acid 0.99%



6. Direction for use: All packaging, less than 20kg or 20 litres:

7. Additional wording requested for use on label (if any): \_\_\_\_\_

8. Claims for products other than fertilizer: \_\_\_\_\_

9. Additional information attached in support of application: \_\_\_\_\_

**DECLARATION**

I hereby certify that the information furnished in this application is to the best of my knowledge true, correct and complete.

T.W. Mervyn  
INITIALS AND SURNAME

SIGNATURE: [Signature]

Consultant  
CAPACITY

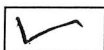
DATE: 11-07-2019

(Any person who in any application makes any statement which is false in any material respect, knowing it to be false, or fails to disclose any information with intent to deceive, shall be guilty of an offence.)

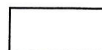
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The Registrar (Act 36 of 1947)

The registration is recommended .....



\*Not recommended .....



Technical Adviser [Signature]

Date 10/09/2019

\*Any reason for not recommending an application for registration or any conditions that should be imposed on the registration must be attached in the form of a minute.

**TECHNICAL ADVISER'S COMMENTS:**



## Certificate of Analysis

**Certificate number:** C0287-05-16  
**Date:** 5 July 2019  
**Customer:** ECOFARMA SA

Analyte	Unit	Ecofarma Fulgro CAAN
Fulvic Acid	m/m %	0.99
Ammonium Nitrate Nitrogen	m/m %	14.89
pH (as is)	-	0.79
Density	g/cm <sup>3</sup>	1.362
Carbon	m/m %	3.70
Zinc	m/m ppm	101
Copper	m/m ppm	105
Nickel	m/m ppm	5.62
Chromium	m/m ppm	7.03
Arsenic	m/m ppm	0.19
Selenium	m/m ppm	0.01
Cadmium	m/m ppm	0.04
Lead	m/m ppm	0.59
Mercury	m/m ppm	0.01

E Laubscher  
 Technical Signatory  
 Chemtech QC

This document has been produced electronically and is valid without a signature.

The results on this analysis report relate only to the sample received. Although intrinsic errors in glassware, instruments and assayed purity of the standard reference material do occur, all reasonable precautions were taken to ensure accurate analyses. Although great care has been taken by Omnia Fertilizer, a division of Omnia Group (Pty) Ltd (Omnia) and its employees in the preparation of the report, Omnia shall under no circumstances be liable for any claim for damages or loss, from any cause whatsoever, whether caused directly or indirectly as a result of any person who utilized the information or act on strength of such report.

Omnia Fertilizer • Kunsmis  
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 'n Afdeling van Omnia Groep (Edms) Bpk  
 Reg No. • Reg Nr. 2005/013996/07

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**Directors • Direkteure** AJ De Lange, T Gobalsamy, JB Keenan, RK Ramoupi **Secretary • Sekretaris** A Matwa (ACIS)





Ecofarma Southern Africa (Pty) Ltd  
Reg No: 2016/388451/07  
Unit 3 Pretoria Industrial Park, 50 Delfos Road,  
Pretoria Industrial, Tshwane, RSA  
Email: [info@ecofarma.co.za](mailto:info@ecofarma.co.za)

## MATERIAL DATA SAFETY SHEET

### ECOFARMA FULGRO CAAN

#### SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	Ecofarma FULGRO CAAN
Alternative Name	
Recommended Use	Agriculture, turf, ornamental
Manufacturer/Distributor	Ecofarma Southern Africa (Pty) Ltd Unit 3, Pretoria Industrial Park 50 Delfos Road, Pretoria Industrial Tshwane, Gauteng, South Africa <a href="mailto:info@ecofarma.co.za">info@ecofarma.co.za</a> <a href="http://www.ecofarma.co.za">www.ecofarma.co.za</a>
Emergency Telephone Number	+27(0)64 727 7927

#### SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Fulvic Acid 9.9 g/L (7.3 g/kg) Nitrogen 148.9 g/L (109 g/kg)
Synonyms/Common Names	Humates, Fulvic Acid, ANN
Category	Group 3 Fertiliser (RSA, Act 36 of 1947)
Registration No.	TBD

#### SECTION 3 — HAZARDS IDENTIFICATION

Physical hazard	Not applicable
Health Hazard	May cause eye irritation; irritant to the mouth, throat and stomach if ingested.
Environmental Hazard	Not applicable

#### SECTION 4 — FIRST AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Directors: PJK Johansson (Swedish), KJE Lindblom (Swedish)



Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Most important symptoms/effects: acute or delayed	Irritation of eyes
General information	Seek medical attention if any irritation exists

## SECTION 5 — FIRE FIGHTING MEASURES

Extinguishing media	Use Media appropriate for surrounding fire
Special Hazards arising from substance or media	During fire, gases hazardous to health may be formed. Heating (flames) of closed or sealed containers may cause violent rupture of container due to thermal expansion of compressed gases. If exposed to substance refer to section 4.
Advice for firefighter	Approach fire with appropriate firefighting uniform and equipment. Move storage containers away from fire if safe to do so. Keep storage containers cool with water spray if in fire. If firefighter experiences any irritations: he/she must obtain medical attention

## SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Move people away from spillage. Wear appropriate protective clothing. If possible minimise spillage area. If spillage area is large: contact local authorities
Environmental precautions	Avoid environmental spillage. Contact local authorities in the event of spillage to aquatic environment.
Methods and material for containment and cleaning up	Always wear protective uniform when cleaning up spill. Refer to section 8
Small spill	Clean up with cloth and rinse area with water. Other basic cleaning equipment suitable for clean-up. Clean all equipment after use
Large spill	Contain spillage area by diking spilled material. Absorb with vermiculate
Reference to other sections	Refer to section 13 for suitable disposal

## SECTION 7 HANDLING AND STORAGE

Precautions for safe handling	Do NOT ingest (breathing or swallow). Wear protective clothing and observe good industrial hygiene practices. Always wash hands and equipment after handling. Do not eat or drink close to storage of material
Conditions for safe storage, including any incompatibilities	Store in original container. Store in cool dry area out of direct sunlight. Ensure that containers are tightly sealed and prevent mixing of foreign materials unless advised otherwise by manufacturer. Refer to section 10 for incompatible materials.

## SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

Control parameters	N/A - No established limits
Engineering controls	Provide eyewash station and suitable ventilation
Exposure controls	
Respiratory	If area does not have good ventilation: wear suitable respiratory equipment.
Eyes	Wear protective glasses or goggles



Skin	Wear appropriate protective clothing and gloves when handling material.
General hygiene considerations	Do not smoke, eat or drink when handling material. Wash clothing and hands regularly.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dark Brown, Black liquid
Odour	Musty
pH	0-2
Melting/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	800 degrees celcius
Evaporation rate	Not measured
Flammability	N/A
Upper flammability or explosive limits	N/A
Lower flammability or explosive limits	N/A
Vapour pressure	Not available
Vapour density	Not available
Specific gravity	1.362
Solubility in water	Yes-soluble
Partition coefficient n-octanol/water (Log Kow)	Not measured
Auto-ignition temperature	Not measured
Decomposition temperature	Not measured
Viscosity	Not measured

## SECTION 10 STABILITY AND REACTIVITY

Reactivity	Avoid interaction with heat (flames), oxidizers, acids or alkalis (see details below in this section).
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None Known
Conditions to avoid	Temperatures above 49°C and below 0°C
Hazardous decomposition products	None Known

## SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects	
Oral	Not determined
Inhalation	Not determined
Skin contact	Not determined
Eyes contact	Not determined
Chronic	No data available
Reproductive	No data available
Mutagenicity	No data available

## SECTION 12 ECOLOGICAL INFORMATION

Toxicity	No data available
Persistence and degradability	No data available
Bio-accumulative potential	Not measured
Mobility in soil	Not determined
Results of PBT and vPvB assessment	N/A
Other adverse effects	No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods	Dispose of in accordance to local legislation and environmental regulations. Do not dispose of in ponds, waterways or any aquatic environment.
Contaminated product	Do not return contaminated material or spilled material back into uncontaminated material or storage packaging
Packaging	Packaging may be reused or recycled unless packaging is contaminated or broken then it should be discarded in accordance with local legislation.

## SECTION 14 TRANSPORT INFORMATION

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	Not regulated as dangerous goods
Packing group	N/A

## SECTION 15 REGULATORY INFORMATION

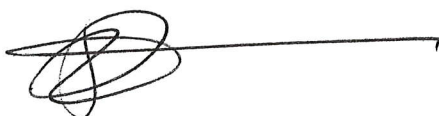
Safety, health and environmental regulations/legislation specific for the substance or mixture	Not classified as a substance hazardous for supply
Chemical safety assessment	Not regulated

## SECTION 16 OTHER INFORMATION

Date MSDS Prepared	16 May 2019
Date of Issue	
Date of Previous Issue	
Version	1
MSDS Prepared By	P de Jager

### Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.





#### INDEPENDANT RESEARCH FACILITY

Statistical **POT TRIALS** - different crops and treatments  
including root studies

**REPORTS** on yield, plant and soil analysis

Nutrition **RECOMMENDATIONS**

Assistance with **REGISTRATIONS** - Act 36 of 1947



## EVALUATING THE EFFECT OF "Ecofarma Fulgro CAAN" ON THE YIELD OF MAIZE AND BEANS

### INTRODUCTION

The use of soil conditioners and plant growth stimulants to improve/enhance plant growth and fertilizer efficacy is becoming increasingly popular in South Africa. At present there are many new/different products and blends available. When evaluating a new product with possible claims of a stimulation effect the possibility of a detrimental phyto-toxicity effect, must also be evaluated.

### SCOPE

The scope of this study was to do a pot trial under controlled environmental conditions to evaluate "Ecofarma Fulgro CAAN" at variable application rates on the plant and root biomass production, as well as the possibility of the phyto-toxicity risk.

### METHODS AND MATERIALS

**Soil** A red sandy loam sand soil was used.

#### Test product and treatments

Based on the recommended application rates as prescribed, the product was applied in combination with a standard 3:2:2(35) fertilizer at 2 grams per pot (Equivalent to 800kg/ha due to the fact that 2 plants per pot equates 350,000 plants per ha. necessitating higher fertilizer application). The product was applied at varying application rates (half, full and double the normal recommended rates). This is in line with the requirements of the regulations (Act 36 of 1947) for registering products as a Group 3 fertilizer (M-registration) as a soil conditioner or plant growth enhancer.

The different test product application rates are as set out in Table1.

**Table 1. Treatments used in the maize trial**

No	Product	Application rate
1	Control 2 g 3:2:2 (35)	2 g/pot
2	Ecofarma Fulgo CAAN 0.5x	62.5 l/ha
3	Ecofarma Fulgo CAAN 1x	125 l/ha
4	Ecofarma Fulgo CAAN 2x	250 l/ha

**Crops** Maize and beans.



**Trial layout** Pots containing 6 kg of soil were treated as follows: At planting 2 g/pot of a 3:2:2(35) fertilizer mixture was applied as a band in the centre of the pot, 4cm deep. The product was applied with the first irrigation after planting. Treatments were replicated 5 times. At harvest the plants of the remaining replicates were cut above the soil, weighed (wet mass), oven dried at 65°C and weighed again (dry mass). The replicates of each treatment was pooled and sent to the laboratory for standard chemical analysis (not reported)

After harvest the soil of the different replicates of each treatment was also pooled and after homogenisation, a representative sample was sent to the laboratory for a standard soil chemical analysis (not reported).

**Statistics** All data analyses were performed using SAS 9.4 statistical software (SAS 2014).

A 10 % level of significance was tested, as the 5% level was viewed as being too strict.

A SAS program was used to calculate the ANOVA's, LSD (Fisher unprotected t-test) and CV.

## RESULTS AND DISCUSSION

### Yield results

#### Biomass yield results of maize

The yield results of the maize trial are presented in Table 2. Based on these results the following observation was made.

**Treatment 1:** The control that received only 3:2:2(35) was used to compare the performance of the different product at different application rates.

**Ecofarma Fulgro CAAN:** The yields were **higher** than the control on all the recommended application rates. No detrimental effects were evident.

**Table 2. Influence of product on the biomass yield of maize**

	Biomass g/pot	
	WET	DRY
Control 2 g 3:2:2 (35)	75.750 ab	6.250 a
Ecofarma Fulgo CAAN 0.5x	91.250 a	7.500 a
Ecofarma Fulgo CAAN 1x	93.000 a	7.500 a
Ecofarma Fulgo CAAN 2x	89.250 ab	6.750 a
LSD=(p=0.1)	13.83	1.606

Means with the same letters do not differ significantly at the 10% significant level

#### Biomass yield results of beans

**Treatment 1:** The control that received only 3:2:2(35) was used as reference to compare the effect of the product on the growth of beans.

**Ecofarma Fulgro CAAN:** The highest application rate was higher than the control, the half and normal application rates were lower than the control. Application rates should be increased.

**Table 3. Biomass yield of beans at end of trial**



Treatment	Biomass g/pot	
	WET	DRY
Control 2 g 3:2:2 (35)	55.750a	6.250a
Ecofarma Fulgo CAAN 0.5x	43.750b	5.000a
Ecofarma Fulgo CAAN 1x	49.750ab	6.500a
Ecofarma Fulgo CAAN 2x	57.250a	6.500a
LSD(p=0.01)	10.05	1.65

Means with the same letters do not differ significantly at the 10% significant level

## CONCLUSIONS

### Yield results Maize:

- The yields were **higher** than the control with all the recommended application rates.
- No detrimental effects were evident.

### Yield results Beans

- The highest application rate was higher than the control, the half and normal application rates were lower than the control.
- Application rates should be increased.

## RECOMMENDATIONS

Registration of "Ecofarma Fulgro CAAN" as a Group 3 (M) fertilizer is recommended. No detrimental effects were found.



.....  
Dr. JA Janse van Vuuren

