



# SAFETY DATA SHEET

## Galigan 240 EC

Revision Date 29-Jul-2019

Version 1

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H-0154-26783 26783 AG-O1-240 EC

### Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### Product identifier

## Galigan 240 EC

Synonyms

Oxyfluorfen 240 EC

Pure substance/mixture

Mixture

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

Recommended Use

Herbicide

Uses advised against

No information available

#### Details of the supplier of the safety data sheet

Supplier Address

ADAMA SOUTH AFRICA (PTY) LTD  
Ground Floor, Simeka House  
The Vineyards Office Estate  
99 Jip de Jager Drive  
Bellville 7530

For further information, please contact

Email address

SDS@ADAMA.COM

Emergency Telephone

Emergency Telephone

+ 27 82 446 8946  
+ 27 86 155 5777  
+ 27 21 982 1460

### Section 2: HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Aspiration toxicity	Category 1 - (H304)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Reproductive toxicity	Category 1B - (H360D)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Flammable liquids	Category 3 - (H226)

**Label Elements****Hazard pictograms****Signal word**

Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
 H315 - Causes skin irritation  
 H318 - Causes serious eye damage  
 H335 - May cause respiratory irritation  
 H360D - May damage the unborn child  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H410 - Very toxic to aquatic life with long lasting effects  
 H226 - Flammable liquid and vapor

**Precautionary Statements**

P102 - Keep out of reach of children  
 P201 - Obtain special instructions before use  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P331 - Do NOT induce vomiting  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards**

No information available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Chemical Name	Weight-%	CAS No	EC No	GHS Classification	M-Factor
Oxyfluorfen	23-27	42874-03-3	255-983-0	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=10 M=10
2-Ethylhexan-1-ol	1-2	104-76-7	203-234-3	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	
calcium dodecylbenzenesulphonate	1-4	26264-06-2	247-557-8	Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	
N-Methyl-2-pyrrolidone	6-10	872-50-4	212-828-1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 1B (H360) STOT SE 3 (H335)	
Xylene	56-63	1330-20-7	215-535-7	Flam. Liq. 3 (H226) Acute Tox. 4 (H312) Skin Irrit. 2 (H315) Acute Tox. 4 (H332)	

				Eye Irrit. 2 (H319) Asp. Tox. 1 (H304) STOT SE 3 (H335) STOT RE 2 (H373)	
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## Section 4: FIRST AID MEASURES

### First aid measures

<b>General advice</b>	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.
<b>Inhalation</b>	Remove to fresh air. Call a physician or poison control center immediately.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
<b>Eye contact</b>	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep eye wide open while rinsing.
<b>Ingestion</b>	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Rinse mouth.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

### Most important symptoms and effects, both acute and delayed

**Symptoms** None known.

### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

## Section 5: FIRE-FIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable Extinguishing Media**

No information available.

### Special hazards arising from the substance or mixture

No specific hazard known.

### Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### **Personal precautions**

Remove all sources of ignition. Evacuate personnel to safe areas. Use only with adequate ventilation. Use personal protective

equipment as required. Keep people away from and upwind of spill/leak.

#### For emergency responders

Use personal protection recommended in Section 8.

#### Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

#### Methods and material for containment and cleaning up

##### Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal.

#### Reference to other sections

#### Other Information

See also section 8,13

## Section 7: HANDLING AND STORAGE

#### Precautions for safe handling

##### Advice on safe handling

Use only with adequate ventilation. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

##### General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

#### Conditions for safe storage, including any incompatibilities

##### Storage Conditions

Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

#### Specific end use(s)

##### Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### National occupational exposure limits

Chemical Name	European Union	United Kingdom	France	Spain	Germany
2-Ethylhexan-1-ol 104-76-7					TWA: 10 ppm TWA: 54 mg/m <sup>3</sup> Ceiling / Peak: 10 ppm Ceiling / Peak: 54 mg/m <sup>3</sup> TWA: 20 ppm TWA: 110 mg/m <sup>3</sup>
N-Methyl-2-pyrrolidone 872-50-4		STEL: 75 ppm STEL: 309 mg/m <sup>3</sup> TWA: 10 ppm TWA: 40 mg/m <sup>3</sup> Skin	TWA: 40 mg/m <sup>3</sup> TWA: 10 ppm STEL: 80 mg/m <sup>3</sup> STEL: 20 ppm	S* STEL: 20 ppm STEL: 80 mg/m <sup>3</sup> TWA: 10 ppm TWA: 40 mg/m <sup>3</sup>	TWA: 20 ppm TWA: 82 mg/m <sup>3</sup> Ceiling / Peak: 40 ppm Ceiling / Peak: 164 mg/m <sup>3</sup> Skin

Xylene 1330-20-7	S* TWA 50 ppm TWA 221 mg/m <sup>3</sup> STEL 100 ppm STEL 442 mg/m <sup>3</sup>	STEL: 100 ppm STEL: 441 mg/m <sup>3</sup> TWA: 50 ppm TWA: 220 mg/m <sup>3</sup> Skin	TWA: 50 ppm TWA: 221 mg/m <sup>3</sup> TWA: 1000 mg/m <sup>3</sup> STEL: 100 ppm STEL: 442 mg/m <sup>3</sup> STEL: 1500 mg/m <sup>3</sup>	S* STEL: 100 ppm STEL: 442 mg/m <sup>3</sup> TWA: 50 ppm TWA: 221 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 440 mg/m <sup>3</sup> Ceiling / Peak: 200 ppm Ceiling / Peak: 880 mg/m <sup>3</sup> Skin
<b>Chemical Name</b>	<b>Italy</b>	<b>Portugal</b>	<b>Netherlands</b>	<b>Finland</b>	<b>Denmark</b>
N-Methyl-2-pyrrolidone 872-50-4			Skin STEL: 80 mg/m <sup>3</sup> TWA: 40 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 40 mg/m <sup>3</sup> STEL: 20 ppm STEL: 80 mg/m <sup>3</sup> Skin	TWA: 5 ppm TWA: 20 mg/m <sup>3</sup> Skin
Xylene 1330-20-7	TWA: 50 ppm TWA: 221 mg/m <sup>3</sup> STEL: 100 ppm STEL: 442 mg/m <sup>3</sup> Skin	STEL: 150 ppm TWA: 100 ppm	Skin STEL: 442 mg/m <sup>3</sup> TWA: 210 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 220 mg/m <sup>3</sup> STEL: 100 ppm STEL: 440 mg/m <sup>3</sup> Skin	TWA: 25 ppm TWA: 109 mg/m <sup>3</sup> Skin
<b>Chemical Name</b>	<b>Austria</b>	<b>Switzerland</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>
2-Ethylhexan-1-ol 104-76-7	Skin STEL 100 ppm STEL 540 mg/m <sup>3</sup> TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 110 mg/m <sup>3</sup> TWA: 20 ppm TWA: 110 mg/m <sup>3</sup>	STEL: 320 mg/m <sup>3</sup> TWA: 160 mg/m <sup>3</sup>		
N-Methyl-2-pyrrolidone 872-50-4	Skin STEL 20 ppm STEL 80 mg/m <sup>3</sup> TWA: 10 ppm TWA: 40 mg/m <sup>3</sup>	Skin STEL: 40 ppm STEL: 160 mg/m <sup>3</sup> TWA: 20 ppm TWA: 80 mg/m <sup>3</sup>	STEL: 80 mg/m <sup>3</sup> TWA: 40 mg/m <sup>3</sup> Skin	TWA: 5 ppm TWA: 20 mg/m <sup>3</sup> Skin STEL: 20 ppm STEL: 80 mg/m <sup>3</sup>	TWA: 25 ppm TWA: 101 mg/m <sup>3</sup> Skin
Xylene 1330-20-7	Skin STEL 100 ppm STEL 442 mg/m <sup>3</sup> TWA: 50 ppm TWA: 221 mg/m <sup>3</sup>	Skin STEL: 200 ppm STEL: 870 mg/m <sup>3</sup> TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>	TWA: 100 mg/m <sup>3</sup> Skin	TWA: 25 ppm TWA: 108 mg/m <sup>3</sup> Skin STEL: 37.5 ppm STEL: 135 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 221 mg/m <sup>3</sup> STEL: 100 ppm STEL: 442 mg/m <sup>3</sup> Skin

**Exposure controls****Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment****Eye/face protection**

Tight sealing safety goggles.

**Hand Protection**

Gloves made of plastic or rubber.

**Body Protection**

Gloves made of plastic or rubber, Antistatic footwear, Wear fire/flammable resistant/retardant clothing, Suitable protective clothing, Apron.

**Respiratory protection**

Use only with adequate ventilation.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

**Environmental exposure controls**

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****Physical and Chemical Properties**

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
<b>Appearance</b>			
Physical state	: Liquid		
Color	: Amber		
Odor	: Aromatic		
Odor threshold	: No data available		
pH	: 5 - 7	CIPAC MT 75.2	
Melting point/freezing point °C	: ----		Not Applicable
Boiling point/boiling range °C	: No data available		
Flash point °C	: 31.3		
Evaporation rate	: Not Applicable		
Flammability (solid, gas)	: Not applicable for liquids		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: ----		Not Applicable
Vapor density	: No data available		
Relative density	: 0.94 - 1.04		20 °C
Solubility(ies) mg/l	: ----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
Autoignition temperature °C	: 450		
Decomposition temperature °C	: No data available		
Kinematic viscosity mm <sup>2</sup> /s 40 °C	: 2.3		
Explosive properties	: May form explosive mixtures with air		
Oxidizing properties	: Not oxidizing		
<b>Other Information</b>			
Bulk density g/ml	: ----		Not Applicable
Surface tension mN/m	: 27.3		40°C

## Section 10: STABILITY AND REACTIVITY

### Reactivity

Not available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Heat, flames and sparks.

### Incompatible Materials

No information available

### Hazardous Decomposition Products

None under normal use conditions.

## Section 11: TOXICOLOGY INFORMATION

Information on toxicological effects**Acute toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: 4599	Rat		
Dermal LD50 mg/kg	: > 4000	Rabbit		
Inhalation LC50 mg/l/4h	: > 5	Rat		
Skin corrosion/irritation	: Moderate skin irritation			
Serious eye damage/eye irritation	: Severely irritating to eyes			
Respiratory/skin sensitization	: Not a skin sensitizer			

**Chronic toxicity****Germ cell mutagenicity**

Chemical Name	
Oxyfluorfen	: Not classified

**Carcinogenicity**

Chemical Name	
Oxyfluorfen	: Not Carcinogenic

**Reproductive toxicity**

Chemical Name	
Oxyfluorfen	: Not toxic for the reproductive system

**STOT - single exposure**

Chemical Name	
Oxyfluorfen	: No data available

**STOT - repeated exposure**

Chemical Name	
Oxyfluorfen	: No data available

**Aspiration hazard**

Chemical Name	
Oxyfluorfen	: No data available

**Section 12: ECOLOGICAL INFORMATION**Toxicity**Aquatic toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Acute toxicity				
Fish 96-hour LC50 mg/l	: 25	Rainbow trout		
Crustacea 48-hour EC50 mg/l	: 2.8	Daphnia magna		
Algae 72-hour EC50 mg/l	: 0.1	Algae		
Other plants EC50 mg/l	:			No data available

**Chronic aquatic toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish NOEC mg/l	: No data available			
Crustacea NOEC mg/l	: No data available			
Algae NOEC mg/l	: No data available			
Other plants NOEC mg/l	: No data available			

**Terrestrial Toxicity**

Birds Oral LD50 mg/kg		
Chemical Name		
Oxyfluorfen	: > 947	Bobwhite quail

**Bees Oral LD50 µg/bee**

**Chemical Name**

Oxyfluorfen : &gt; 100

**Persistence and degradability****Abiotic Degradation****Water DT50 days****Chemical Name**

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Oxyfluorfen	: ----		Stable

**Soil DT50 days****Chemical Name**

Oxyfluorfen : 68 - 533

**Biodegradation****Chemical Name**

Oxyfluorfen : No data available

**Bioaccumulative potential****Partition Coefficient****(n-octanol/water) Partition****Coefficient (n-octanol/water) Log****Pow****Chemical Name**

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Oxyfluorfen	: 4.86	EEC A.6	

**Bioconcentration factor (BCF)****Chemical Name**

Oxyfluorfen : No data available

**Mobility in soil****Adsorption/Desorption****Chemical Name**

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Oxyfluorfen	: 7565		Koc

**Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB

**Other adverse effects**

No information available.

<b>Section 13: DISPOSAL CONSIDERATIONS</b>
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**Waste treatment methods****Waste from residues/unused products**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Improper disposal or reuse of this container may be dangerous and illegal.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used.

<b>Section 14: TRANSPORTATION INFORMATION</b>
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**IMDG/IMO**



**UN/ID No \*** 1993  
**Proper shipping name** FLAMMABLE LIQUID, N.O.S. ( Xylene )  
**Hazard Class** 3  
**Packing Group** III  
**Marine pollutant** Yes  
**Special precautions for user**

**RID/ADR**

**UN/ID No \*** 1993  
**Proper shipping name** FLAMMABLE LIQUID, N.O.S. ( Xylene )  
**Hazard Class** 3  
**Packing Group** III  
**Environmental hazard** Yes  
**Special precautions for user**

**ICAO/IATA**

**UN/ID No \*** 1993  
**Proper shipping name** FLAMMABLE LIQUID, N.O.S. ( Xylene )  
**Hazard Class** 3  
**Packing Group** III  
**Environmental hazard** Yes  
**Special precautions for user**  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not Applicable



(Bad file name)

\* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

**Section 15: REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Section 16: OTHER INFORMATION**

**Full text of H-Statements referred to under sections 2 and 3**

- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H226 - Flammable liquid and vapor
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H304 - May be fatal if swallowed and enters airways
- H335 - May cause respiratory irritation
- H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
- H318 - Causes serious eye damage
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H360D - May damage the unborn child

**Revision Note** Changes made to the last version are labeled with this sign \*\*\*.

#### List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
CAS Number - Chemical Abstracts Service number  
EC Number - EINECS and ELINCS Number  
EINECS - European Inventory of Existing Commercial Substances  
ELINCS - European List of notified Chemical Substances  
IATA - International Air Transport Association  
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air  
IMDG - International Maritime Dangerous Goods  
LC50 - Lethal Concentration to 50 % of a test population  
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)  
OECD - Organization for Economic Co-operation and Development  
PBT - Persistent, Bioaccumulative and Toxic substance  
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
STOT - Specific Target Organ Toxicity  
vPvB - Very Persistent and Very Bioaccumulative

#### Disclaimer

**The information provided in this Material 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 and release and is not to be considered a warranty or 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.**

**End of Safety Data Sheet**