



SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Annex II

Leopard 5 EC

Revision Date 09-Feb-2015

Version 2

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

1.1. Product identifier

Leopard 5 EC

Synonyms

Quizalofop-p-ethyl 50 EC

Pure substance/mixture

Mixture

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

Recommended Use

Herbicide

Uses advised against

No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address

ADAMA Agricultural Solutions UK Ltd
Unit 15, Thatcham Buisness Village Colthrop Way,
Thatcham Berkshire RG19 4LW, UK : 01635 860555
Fax: 01635 861555

For further information, please contact

Email address

ukenquiries@adama.com

1.4. Emergency telephone number

Emergency Telephone

National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)

Section 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aspiration hazard Category 1 - (H304)

Serious eye damage/eye irritation Category 2 - (H319)

Specific target organ toxicity (single exposure) Category 3 - (H336)

Hazardous to the Aquatic Environment - Chronic Hazard Category 2 - (H411)

Classification according to Directive 67/548/EEC or 1999/45/EC

Full text of R-phrases: see section 16

Xi;R36 - Xn;R65 - R66 - R67 - N;R51/53

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Signal word

Danger

Hazard Statements

H304 - May be fatal if swallowed and enters airways
 H319 - Causes serious eye irritation
 H336 - May cause drowsiness or dizziness
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P102 - Keep out of reach of children
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 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

EU Specific Hazard Statements

EUH066 - Repeated exposure may cause skin dryness or cracking
 EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Additional phrases for PPP

SP1 - Do not contaminate water with the product or its container

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixture**

Chemical Name	Weight-%	CAS No	EC No	Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Classification according to 67/548/EEC	M-Factor	REACH Registration Number
Quizalofop-p-ethyl	4-7	100646-51-3	-	-	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	N; R50-53		-
Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt	1-3	N/A	-	-	Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	Xi; R41, R38		01-21195605 92-37
2-Ethylhexanol	1-3	104-76-7	203-234-3	-	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H332)	Xi; R36/37/38 Xn; R20		01-21194872 89-20

Poly(oxy-1,2-ethanediy l), .alpha.-[tris(1-phenylet hyl)phenyl]-.omega.-hy droxy-	2-4	99734-09-5	-	-	Aquatic Chronic 3 (H412)	R52/53		-
Hydrocarbons, C10, aromatics, <1% naphthalene	81-90	N/A	918-811-1	-	STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411) (EUH066)	N; R51/53 R65; R66; R67		01-21194635 83-34-0005

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	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!.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.
Ingestion	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Immediate medical attention is required.
Self-protection of the first aider	Use personal protective equipment as required.

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

Symptoms	None known
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

No information available.

5.2. Special hazards arising from the substance or mixture

No specific hazard known.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
 In the event of fire and/or explosion do not breathe fumes

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Other Information

See also section 8,13

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

General Hygiene Considerations

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

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

7.3. 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

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany

2-Ethylhexanol 104-76-7					TWA: 10 ppm TWA: 54 mg/m ³ Ceiling / Peak: 10 ppm Ceiling / Peak: 54 mg/m ³ TWA: 20 ppm TWA: 110 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
2-Ethylhexanol 104-76-7	Skin STEL 100 ppm STEL 540 mg/m ³ TWA: 50 ppm TWA: 270 mg/m ³	STEL: 20 ppm STEL: 110 mg/m ³ TWA: 20 ppm TWA: 110 mg/m ³	STEL: 320 mg/m ³ TWA: 160 mg/m ³		

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Body Protection

Suitable protective clothing, Apron, Gloves made of plastic or rubber.

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

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Appearance			
Physical state	: Liquid		
Color	: light yellow clear		
Odor	: Aromatic		
Odor threshold	: No data available		
pH	: 5.1 - 6.1	CIPAC MT 75.3	
Melting point/freezing point °C	: ----		Not Applicable
Boiling point/boiling range °C	: No data available		
Flash point °C	: 62.1	CIPAC MT 12	
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	: 0.86 - 0.96	CIPAC MT 3.1	20 °C
Solubility(ies) mg/l	: ----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
Autoignition temperature °C	: > 400	EEC A.15	
Decomposition temperature °C	: No data available		
Kinematic viscosity mm²/s 40 °C	: 0.789		
Explosive properties	: Not an explosive	EEC A.14	

Oxidizing properties : Not oxidizing EEC A.21

9.2. Other information

Bulk density g/ml : --- Not Applicable
Surface tension mN/m : 26.9 EEC A.5 25 °C

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects**Acute toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: > 2000	Rat	OECD 423	
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	: > 5.6	Rat	OECD 403	
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: Irritating to eyes	Rabbit	OECD 405	
Respiratory/skin sensitization	: Not a skin sensitizer	Guinea pig	OECD 406	

Chronic toxicity**Germ cell mutagenicity**

Chemical Name
 Quizalofop-p-ethyl : Not classified

Carcinogenicity

Chemical Name
 Quizalofop-p-ethyl : Not Carcinogenic

Reproductive toxicity

Chemical Name
 Quizalofop-p-ethyl : Not toxic for the reproductive system

STOT - single exposure

Chemical Name
Quizalofop-p-ethyl : No data available

STOT - repeated exposure

Chemical Name
Quizalofop-p-ethyl : No data available

Aspiration hazard

Chemical Name
Quizalofop-p-ethyl : No data available

Section 12: ECOLOGICAL INFORMATION**12.1. Toxicity****Aquatic toxicity**

Acute toxicity	Values	Species	Method	Remarks
Fish 96-hour LC50 mg/l	: 5.6	Oncorhynchus mykiss	OECD 203	
Crustacea 48-hour EC50 mg/l	: 13.5	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 38.7	P. subcapitata	OECD 201	Growth rate
Other plants EC50 mg/l	: 66.5	Lemna minor	OECD 221	7 days

Terrestrial Toxicity

Birds Oral LD50 mg/kg
Chemical Name
Quizalofop-p-ethyl : > 2000

Bees Oral LD50 µg/bee
Chemical Name
Quizalofop-p-ethyl : > 94 OECD 213, OECD 214

12.2. Persistence and degradability

Abiotic Degradation	Values	Method	Remarks
Water DT50 days Chemical Name Quizalofop-p-ethyl	: < 1	OECD 308	

Soil DT50 days Chemical Name Quizalofop-p-ethyl	: < 0.5	OECD 307	
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Biodegradation
Chemical Name
Quizalofop-p-ethyl : No data available

12.3. Bioaccumulative potential

Partition Coefficient (n-octanol/water) Log Pow	Values	Method	Remarks
Chemical Name Quizalofop-p-ethyl	: 2.8	OECD 107	

Bioconcentration factor (BCF)
Chemical Name
Quizalofop-p-ethyl : Low

12.4. Mobility in soil

<u>Adsorption/Desorption</u> <u>Chemical Name</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Quizalofop-p-ethyl	: ---		No data available

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS
13.1. 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.

Section 14: TRANSPORTATION INFORMATION
IMDG/IMO

14.1 UN/ID No	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quizalofop-p-ethyl; Hydrocarbons, C10, aromatics, <1% naphthalene)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Marine pollutant	Yes
14.6 Special precautions for user	

RID/ADR

14.1 UN/ID No	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quizalofop-p-ethyl; Hydrocarbons, C10, aromatics, <1% naphthalene)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Yes
14.6 Special precautions for user	

ICAO/IATA

14.1 UN/ID No	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quizalofop-p-ethyl; Hydrocarbons, C10, aromatics, <1% naphthalene)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Yes
14.6 Special precautions for user	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable



Section 15: REGULATORY INFORMATION

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

15.2. Chemical safety assessment

A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R20 - Harmful by inhalation
 R65 - Harmful: may cause lung damage if swallowed
 R66 - Repeated exposure may cause skin dryness or cracking
 R67 - Vapors may cause drowsiness and dizziness
 R36 - Irritating to eyes
 R38 - Irritating to skin
 R41 - Risk of serious damage to eyes
 R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
 R50/53 - Very 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
 R36/37/38 - Irritating to eyes, respiratory system and skin

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

H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H335 - May cause respiratory irritation
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H332 - Harmful if inhaled
 H318 - Causes serious eye damage
 H336 - May cause drowsiness or dizziness
 H304 - May be fatal if swallowed and enters airways
 H411 - Toxic to aquatic life with long lasting effects
 EUH066 - Repeated exposure may cause skin dryness or cracking
 H412 - Harmful to aquatic life with long lasting effects

Revision Note *** - Change from previous version.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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