



SAFETY DATA SHEET

Mosquiron 10 EC

Revision Date 27-Nov-2019

Version 1.01

Publish Date 27-Nov-2019

Product No INS00064-27
R-9075.DPD 7300010 ADM.07000.1.2.A

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

Product identifier

Mosquiron 10 EC

Synonyms	Novaluron 100 EC
Pure substance/mixture	Mixture
Formula	EC

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

Recommended Use	Insecticide
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
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For further information, please contact

Email address	SDS@ADAMA.COM
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Emergency Telephone

Emergency Telephone	+ 27 82 446 8946 + 27 86 155 5777 + 27 21 982 1460
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Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1 - (H317)
Reproductive toxicity	Category 1B - (H360)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

Label Elements

Hazard pictograms



Signal word

Danger

Hazard Statements

H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H360 - May damage fertility or the unborn child
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P102 - Keep out of reach of children
 P201 - Obtain special instructions before use
 P261 - Avoid breathing 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
 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
Novaluron	7 - 11	116714-46-6		Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=1 M=1000
N-Methyl-2-pyrrolidone	42 - 46	872-50-4	212-828-1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 1B (H360) STOT SE 3 (H335)	
Poly(oxy-1,2-ethanediyl),.alp ha.-(C10-14)alkyl-.omega.-hydroxy, phosphate	11 - 13	68585-36-4		Skin Corr. 1B (H314)	

Section 4: FIRST AID MEASURES

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. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
Self-protection of the first aider	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

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

Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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 personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

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 dry, cool and well-ventilated place. Keep in properly labeled containers.

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
N-Methyl-2-pyrrolidone 872-50-4		STEL: 75 ppm STEL: 309 mg/m ³ TWA: 10 ppm TWA: 40 mg/m ³ Skin	TWA: 40 mg/m ³ TWA: 10 ppm STEL: 80 mg/m ³ STEL: 20 ppm	S* STEL: 20 ppm STEL: 80 mg/m ³ TWA: 10 ppm TWA: 40 mg/m ³	TWA: 20 ppm TWA: 82 mg/m ³ Ceiling / Peak: 40 ppm Ceiling / Peak: 164 mg/m ³ Skin
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
N-Methyl-2-pyrrolidone 872-50-4			Skin STEL: 80 mg/m ³ TWA: 40 mg/m ³	TWA: 10 ppm TWA: 40 mg/m ³ STEL: 20 ppm STEL: 80 mg/m ³ Skin	TWA: 5 ppm TWA: 20 mg/m ³ Skin
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
N-Methyl-2-pyrrolidone 872-50-4	Skin STEL 20 ppm STEL 80 mg/m ³ TWA: 10 ppm TWA: 40 mg/m ³	Skin STEL: 40 ppm STEL: 160 mg/m ³ TWA: 20 ppm TWA: 80 mg/m ³	STEL: 80 mg/m ³ TWA: 40 mg/m ³ Skin	TWA: 5 ppm TWA: 20 mg/m ³ Skin STEL: 20 ppm STEL: 80 mg/m ³	TWA: 25 ppm TWA: 101 mg/m ³ Skin

Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Hand Protection	Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact (recommendation: protection index 6, corresponding > 480 minutes Permeability time (permeation) according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm).
Body Protection	Gloves made of plastic or rubber, Suitable protective clothing, Rubber boots, Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact, Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate.
Respiratory protection	Use only with adequate ventilation.
General Hygiene Considerations	When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.
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>
Appearance			
Physical state	: Liquid		
Color	: Salmon pink		
Odor	: characteristic		
Odor threshold	: No data available		
pH	: 2.4 - 3.4	CIPAC MT 75	1 % aqueous solution
Melting point/freezing point °C	: ----		Not Applicable
Boiling point/boiling range °C	: No data available		
Flash point °C	: 102	EEC A.9	
Evaporation rate	: ----		No data available
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	: 1.0 - 1.1	OECD 109	
Solubility(ies) mg/l	: ----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
Autoignition temperature °C	: 256	EEC A.15	
Decomposition temperature °C	: No data available		
Kinematic viscosity mm²/s 40 °C	: 12.8	OECD 114	
Explosive properties	: Not an explosive	EEC A.14	
Oxidizing properties	: No data available		
Other Information			
Bulk density g/ml	:		Not Applicable
Surface tension mN/m	: ----		No data available

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

Exposure to air or moisture over prolonged periods.

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

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	: > 5000	Rat	EPA-FIFRA 81-1	
Dermal LD50 mg/kg	: > 2000	Rat	EPA-FIFRA 81-2	
Inhalation LC50 mg/l/4h	:			No data available
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	EPA-FIFRA 81-5	
Serious eye damage/eye irritation	: Irritating to eyes	Rabbit	EPA-OPPTS 870.2400	
Respiratory/skin sensitization	: Skin sensitizer	Guinea pig	USEPA 86-5	

Chronic toxicity

Germ cell mutagenicity

Chemical Name
Novaluron : Not classified

Carcinogenicity

Chemical Name
Novaluron : Not Carcinogenic

Reproductive toxicity

Chemical Name
Novaluron : Not toxic for the reproductive system

STOT - single exposure

Chemical Name
Novaluron : No data available

STOT - repeated exposure

Chemical Name
Novaluron : No data available

Aspiration hazard

Chemical Name
Novaluron : No data available

Section 12: ECOLOGICAL INFORMATION

Toxicity**Aquatic toxicity**

Acute toxicity	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish 96-hour LC50 mg/l	: 62.4	Rainbow trout	OECD 203	
Crustacea 48-hour EC50 mg/l	: 0.00422	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 87.2	S. capricornutum	OECD 201	
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				
Novaluron	: > 2000	Bobwhite quail	US EPA 71-1	

Bees Oral LD50 µg/bee

Chemical Name				
Novaluron	: > 100	Apis mellifera	EPPO 170	

Persistence and degradability

Abiotic Degradation	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Water DT50 days			
Chemical Name			
Novaluron	: ----		No data available

Soil DT50 days

Chemical Name			
Novaluron	: ----		No data available

Biodegradation

Chemical Name			
Novaluron	: No data available		

Bioaccumulative potential

Partition Coefficient	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
(n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow			
Chemical Name			
Novaluron	: 4.3	OECD 107	

Bioconcentration factor (BCF)

Chemical Name			
Novaluron	: ----		No data available

Mobility in soil

Adsorption/Desorption	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Chemical Name			
Novaluron	: 9598		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.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
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

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Novaluron)
Hazard Class	9
Packing Group	III
Marine pollutant	Yes
Special precautions for user	

RID/ADR

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Novaluron)
Hazard Class	9
Packing Group	III
Environmental hazard	Yes
Special precautions for user	

ICAO/IATA

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Novaluron)
Hazard Class	9
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



* 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

H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H360D - May damage the unborn child
H335 - May cause respiratory irritation

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