



Artemis 750 WG (Nicosulfuron 750 g/kg)

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 8
Issue date: 3/5/2024 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the supplier/undertaking

1.1. GHS product identifier

Product form	: Mixture
Trade name	: Artemis 750 WG (Nicosulfuron 750 g/kg)
Type of product	: Herbicide
CAS-No.	: 111991-09-4
Product group	: End product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

A water dispersible granule, selective post-emergence grass and broadleaf herbicide for the control of grasses, sorghum species and broadleaf weeds in maize.

1.4. Supplier's details

Supplier

Farm-Ag International (Pty) Ltd
Old Mill Industrial Park
61, Marshall Drive
P.O. Box 1523
4300 Mount Edgecombe – Durban KwaZulu Natal
South Africa
T 031 003 3486

1.5. Emergency phone number

Emergency number	: 24 Hr Emergency Number: In case of Poisoning: Poison Information Helpline : 0861 555 777
	In case of Spillage: HAZMAT:0800 147 112

SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects	: Causes skin irritation,Causes serious eye irritation,Very toxic to aquatic life.
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2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



Signal word (GHS-ZA)	: Warning
Hazard statements (GHS ZA)	: H315 - Causes skin irritation

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Precautionary statements (GHS ZA)

- H319 - Causes serious eye irritation
H400 - Very toxic to aquatic life
- : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read carefully and follow all instructions.
P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear 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.
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P501 - Dispose of container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
Nicosulfuron TC	CAS-No.: 111991-09-4	≥ 75 – < 80	Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=100)
Morwet D-425 Powder (Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt)	CAS-No.: 9084-06-4	≥ 10 – < 15	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Morwet EFW (sodium alkyl naphthalene sulfonate blend)	CAS-No.: 105864-15-1	≥ 1 – < 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effect, acute and delayed

- Symptoms/effects after skin contact : Irritation.
- Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Water spray. Foam.

5.2. Specific hazards arising from the chemical

Fire hazard : In case of fire and/or explosion do not breathe fumes.
Reactivity in case of fire : Product is not explosive.
Hazardous decomposition products in case of fire : Carbon monoxide, nitrogen oxides, carbon dioxide, Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Precautionary measures fire : Keep container tightly closed and away from heat, sparks and flame. Keep away from combustible materials.
Firefighting instructions : Appropriate self-contained breathing apparatus may be required. Get the package away from the fire if this can be done without risk. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Personal protection (Emergency response) : Wear respiratory protection, Wear protective gloves, Wear protective clothing, Wear eye protection, Face-shield



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid creating or spreading dust. Dispose of rinse water as waste water.
Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Carefully collect remainder. Minimise generation of dust. Wash contaminated area with large amounts of water.
Other information : Dispose of materials or solid residues at an authorized site.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Do not eat, drink or smoke in areas where product is used. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes. Wash clothing and equipment after handling.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Do not allow run-off from fire fighting to enter drains or water courses. Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ensure adequate ventilation, especially in confined areas. Store locked up.
Storage conditions	: Keep only in original container. Store in a dry place. Store in a closed container. Store in a well-ventilated place. Protect from sunlight.
Packaging materials	: Keep only in the original container in a cool, well-ventilated place away from combustible materials.
Maximum storage period	: 2 years
Storage temperature	: 0 – 30 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment
Personal protective equipment symbol(s)	



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Solid
Appearance	: No data available

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Colour	: White.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50°C	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 0.53 20°C
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Physical state	: Solid
Appearance	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Alkaline mixtures.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (3800 mg/kg)
Acute toxicity (dermal)	: Not classified (2180,23 mg/kg)
Acute toxicity (inhalation)	: Not classified

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Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	89% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
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Nicosulfuron TC (111991-09-4)

LD50 oral rat	> 5000 mg/kg (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 5.47 mg/l/4h

Morwet D-425 Powder (Naphthalenesulfonic acid, polymer with formaldehyde, sodium salt) (9084-06-4)

LD50 oral rat	3800 mg/kg
LD50 dermal rabbit	> 16000 mg/kg

Precipitated calcium carbonate (471-34-1)

LD50 dermal rat	> 2000 mg/kg
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Artemis 750 WG (Nicosulfuron 750 g/kg) (111991-09-4)

Viscosity, kinematic	Not applicable
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Nicosulfuron TC (111991-09-4)

LC50 - Fish [1]	65.7 mg/l (96 h, Oncorhynchus mykiss, Static system, Experimental value)
LC50 - Other aquatic organisms [1]	0.0032 mg/l Lemna gibba
EC50 - Crustacea [1]	90 mg/l (48 h, Daphnia magna, Experimental value, Static system)
ErC50 algae	0.0017 mg/l (US EPA, 168 h, Lemna gibba, Semi-static system, Experimental value)

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Nicosulfuron TC (111991-09-4)

Additional data	Birds: Acute oral LD50 for bobwhite quail >2000 mg/kg. Dietary LC50 (5d) for mallard ducks and bobwhite quail >5000 mg/kg diet. Bees (LD50, ug/bee) >76 (contact). Worms: LC50 (14d) for Eisenia fetida >1000 mg/kg soil.
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Precipitated calcium carbonate (471-34-1)

LC50 - Fish [1]	> 100 % (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 % (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

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Persistence and degradability	No additional information available
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Nicosulfuron TC (111991-09-4)

Persistence and degradability	Not readily biodegradable in water.
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Precipitated calcium carbonate (471-34-1)

Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

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Bioaccumulative potential	No additional information available
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Nicosulfuron TC (111991-09-4)

Partition coefficient n-octanol/water (Log Kow)	0.61 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Precipitated calcium carbonate (471-34-1)

Bioaccumulative potential	Not bioaccumulative.
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12.4. Mobility in soil

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Mobility in soil	No additional information available
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Nicosulfuron TC (111991-09-4)

Ecology - soil	Highly mobile in soil.
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Precipitated calcium carbonate (471-34-1)

Surface tension	No data available (test not performed)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

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SECTION 13: Disposal Considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3077	3077	3077
14.2. UN Proper Shipping Name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains nicosulfuron 750 g/kg)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains nicosulfuron 750 g/kg)	Environmentally hazardous substance, solid, n.o.s. (contains nicosulfuron 750 g/kg)
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group, if applicable		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS) : 179, 274, 331, 335
Limited quantities (SANS) : 5 kg
Limited quantities (SANS) : 5 kg
Packagings, large packagings and IBCs Packing instructions (SANS) : P002, IBC08, LP02
Packagings, large packagings and IBCs Special packing instructions (SANS) : PP12, B3
Portable tank and bulk containers instructions (SANS) : T1, BK2
Portable tank and bulk container special provisions (SANS) : TP33

IMDG

Special provisions (IMDG) : 274, 335, 966, 967, 969
Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : LP02, P002
Special packing provisions (IMDG) : PP12
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : BK1, BK2, BK3, T1
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE

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EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG) : A

IATA

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y956
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 956
PCA max net quantity (IATA) : 400kg
CAO packing instructions (IATA) : 956
CAO max net quantity (IATA) : 400kg
Special provisions (IATA) : A97, A158, A179, A197, A215
ERG code (IATA) : 9L

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information

Issue date : 05/03/2024

Full text of H-statements:

H315	Causes skin irritation
H319	Causes serious eye irritation
H400	Very toxic to aquatic life

Safety Data Sheet (SDS), South Africa (HCA)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.