



SAFETY DATA SHEET

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

Hurricane

Revision date 18-Oct-2021

Version 3 Supersedes Date: 02-Sep-2014

Product Code(s)

HRB00869-44

Print Date 18-Oct-2021

ADM.02250.H.1.A 12732

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

1.1. Product identifier

Hurricane

Other means of identification

Synonyms

Diflufenican 500 SC

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

ADAMA Agricultural Solutions UK Ltd
Third Floor East
1410 Arlington Business Park
Theale
READING
RG7 4SA
Tel: 01635 860555
Fax: 01635 861555

For further information, please contact

E-mail address

ukenquiries@adama.com

1.4. Emergency telephone number

Emergency Telephone

National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)
National Poisons Information Centre (Republic of Ireland)
Tel: 01 809 2166 (8am – 10pm 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements

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



Signal word	Warning
Hazard statements	H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements	P102 - Keep out of reach of children P501 - Dispose of contents/ container to an approved waste disposal plant
EU Specific Hazard Statements	EUH208 - Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction. 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 (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3. Other hazards

PBT & vPvB	The product does not contain any substance(s) classified as PBT or vPvB.
Endocrine Disruptor Information	None known.
Persistent Organic Pollutants	Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No	EC No	Index No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	REACH Registration Number
Diflufenican	83164-33-4	617-446-2	616-032-00-9	40-44	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)		M=10000 M=1000	No data available
1,2-Benzisothiazolin-3-one	2634-33-5	220-120-9	613-088-00-6	< 0.5	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 4	Skin Sens. 1 :: C>=0.05%		01-212076154 0-60-XXXX

					(H302) Aquatic Acute 1 (H400)			
--	--	--	--	--	--	--	--	--

Acute toxicity estimates (ATEs) according to Part 3 of Annex VI to Regulation (EC) No 1272/2008 are indicated in this table, if available.

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

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

Symptoms	None known.
-----------------	-------------

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
---------------------------	------------------------

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small Fire	Dry chemical, CO ₂ , water spray or regular foam
Large Fire	Do not scatter spilled material with high pressure water streams Dike fire-control water for later disposal Water spray, fog or regular foam Move containers from fire area if you can do it without risk
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

A fire or explosion	Some may burn but none ignite readily Containers may explode when heated Some may be transported hot
Specific hazards arising from the chemical	No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Health risks Contact may cause burns to skin and eyes
Runoff from fire control may cause pollution
Fire may produce irritating, corrosive and/or toxic gases
Inhalation of material may be harmful
Inhalation of Asbestos dust may have a damaging effect on the lungs
Some liquids produce vapors that may cause dizziness or suffocation

Spill or Leak Avoid inhalation of asbestos dust
Do not touch or walk through spilled material
Prevent dust cloud
Stop leak if you can do it without risk

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Identified uses
Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

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.

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).

Skin and body protection

Use suitable protective clothing and equipment if required, such as safety goggles certified to EN 166, gloves certified to EN 374, protective boots certified to EN 13832, and/or a water repellent woven coverall with 65% polyester and 35 % cotton.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained.

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	: white		
Odor	: Acid Slight		
Odor threshold	: No data available		
pH	: 6.5 - 9.5	CIPAC MT 75.3	
Melting point / freezing point °C	: ----		Not applicable
Boiling point / boiling range °C	: No data available		
Flash point °C	: > 100	EEC A.9	
Evaporation rate	: No data available		
Flammability (solid, gas)	: Not applicable		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: ----		Not applicable
Vapor density	: No data available		
Relative density	: 1.14 - 1.24	EEC A.3	
Solubility(ies) mg/l	: ----		Not applicable
Partition coefficient Log Pow	:		See Section 12 for additional Ecological Information
Autoignition temperature °C	: 550	EEC A.15	
Decomposition temperature °C	: No data available		
Kinematic viscosity mm²/s 40 °C	: 1706	OECD 114	

Surface tension	: 35.7	EEC A.5	1% 25°C
Particle Size	: Not applicable		

9.2. Other information

Bulk density g/ml : ----

9.2.1. Information with regard to physical hazard classes

Explosive properties : Not an explosive
Oxidizing properties : Not oxidizing

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: > 2000	Rat	OECD 401	Maximum attainable concentration
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 mg/l	: > 1.43	Rat	OECD 403	
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: Not irritating to eyes	Rabbit	OECD 405	
Sensitization	: Not a skin sensitizer	Guinea pig	OECD 406	

Chronic toxicity**Germ cell mutagenicity****Chemical name**

Diflufenican : Not classified

Carcinogenicity**Chemical name**

Diflufenican : Not Carcinogenic

Reproductive toxicity**Chemical name**

Diflufenican : Not toxic for the reproductive system

STOT - Single Exposure**Chemical name**

Diflufenican : Not classified

STOT - Repeated Exposure**Chemical name**

Diflufenican : Not classified

Aspiration hazard**Chemical name**

Diflufenican : Not classified

11.2. Information on other hazards**11.2.1. Endocrine disrupting properties****Endocrine disrupting properties** No information available.**11.2.2. Other information****Other adverse effects** No information available.**SECTION 12: Ecological information****12.1. Toxicity****Acute toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish 96-hour LC50 mg/l	: > 100	Oncorhynchus mykiss	OECD 203	
Crustacea 48-hour EC50 mg/l	: > 100	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 0.00174	S. capricornutum	OECD 201	
Other plants EC50 mg/l	: ----			Not 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	: 0.000939	Selenastrum capricornutum	OECD 201	
Other plants NOEC mg/l	: No data available			

Terrestrial Toxicity**Birds Oral LD50 mg/kg****Chemical name**

Diflufenican : > 2150 Bobwhite quail

Bees Oral LD50 µg/bee**Chemical name**

Diflufenican : > 100 Apis mellifera EPPO 170

12.2. Persistence and degradability**Abiotic Degradation****Water DT50 days****Chemical name**

Diflufenican : 1-5 BBA IV: 5-1

Soil DT50 days**Chemical name**

Diflufenican : 128 EPA / SETAC

Biodegradation**Chemical name**

Diflufenican : No information available

12.3. Bioaccumulative potential**Partition Coefficient (n-octanol/water) Log Pow****Chemical name**

<u>Chemical name</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Diflufenican	: 4.2	OECD 117	
Diflufenican	: 1276 - 1596	OECD 305	
Diflufenican	: 3417		KOC

Bioconcentration factor (BCF)**Chemical name****12.4. Mobility in soil****Adsorption/Desorption****Chemical name****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. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

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: Transport information**ADR**

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Transport hazard class(es)	9
14.4 Packing group	III

Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 601, 375
Classification code	M6
RID	
14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III
Environmental hazard	Yes
Special Precautions for Users	
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 375, 601
Classification code	M6
IMDG	
14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III, Marine pollutant
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
14.5 Marine pollutant	P
Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 969
EmS-No	F-A, S-F
IMDG Stowage and segregation	Category A No information available
14.7 Maritime transport in bulk according to IMO instruments	No information available
IATA	
14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diflufenican), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	A97, A158, A197
ERG Code	9L



SECTION 15: Regulatory information

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

Trade name / designation	Registration Number(s)	Date
Not Applicable	Not Applicable	Not Applicable

Comply with trade association/occupational health regulations.

Comply with regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market.

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

15.2. Chemical safety assessment

Chemical Safety Report A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Revision date 18-Oct-2021

Reason for revision 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

Classification according to Regulation (EC) No. 1272/2008 [CLP]**Classification of the mixture**

H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Classification procedure

Classification based on test data
Classification based on test data

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

Disclaimer

The information provided in this 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