SAFETY DATA SHEET

DUDIM 4G

Version	Revision Date:	SDS Number:	Country: GB
4.4	04.12.2018	400000003974	Language: EN

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

1.1 Product identifier

Trade name : DUDIM 4G

Product code : 400000003974

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

Use of the Substance/Mixture : Insecticide

Recommended restrictions on use : Biocides, For professional users only.

1.3 Details of the supplier of the safety data sheet

Details of the supplier of the safety data sheet

Company:

Arysta LifeScience Netherlands BV
Corridor 5 C
ZA Breukelen
Netherlands
3621
Telephone : +44 (0)1386 425519

Prepared by

sds.request@arysta.com

Further information for the safety data sheet :
sds.request@arysta.com

1.4 Emergency telephone number

Emergency telephone number:

+44 (0) 1235 239 670 (NCEC)
NPIS (National Poison Centre) - Birmingham Unit
(To be called by medical staff or physicians)
City Hospital, Birmingham, B18 7QH, UK
Tel: 0344 892 0111
x

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life. (Calculation method)
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects. (Calculation method)

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements	: H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements	: **Prevention:**	
	P273	Avoid release to the environment.
	Response:	
	P391	Collect spillage.
	Disposal:	
	P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Occupational health effects due to inhalation of mineral dusts incorporating crystalline silica (quartz, cristobalite, tridymite), crystalline silicates (kaolin, talc) graphite or coal.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Diflubenzuron 4 %w/w - WG

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea	35367-38-5 252-529-3	STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 2.5 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid formation of respirable particles. Avoid exceeding the given occupational exposure limits (see section 8). For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Insecticide

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Quartz (SiO2) (fine fraction < 1%)	14808-60-7	TWA (respirable dust)	0.1 mg/m3 (Silica)	GB EH40
kaolin	1332-58-7	TWA (respirable dust)	2 mg/m3	GB EH40
titanium dioxide	13463-67-7	TWA (inhalable dust)	10 mg/m3	GB EH40
		TWA (respirable dust)	4 mg/m3	GB EH40

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields

Eye wash bottle with pure water

Hand protection
- Material : butyl-rubber
- Break through time : > 480 min
- Glove thickness : 0.4 mm
- Protective index : Class 6

Remarks : Before removing gloves clean them with soap and water. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.

Filter type : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	granules
Colour	:	grey
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/range	:	No data available
Boiling point/boiling range	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	No data available
Density	:	1.4 - 1.5 g/cm3
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Oxidizing properties	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if used as directed.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Acute oral toxicity : LD50 (Rat): > 4,640 mg/kg
GLP: no
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 2.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhala-

tion toxicity
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:
Remarks: Based on available data, the classification criteria are not met.

Components:
Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:
Species: Rabbit
Result: No skin irritation
GLP: yes

Serious eye damage/eye irritation

Product:
Remarks: Based on available data, the classification criteria are not met.

Components:
Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:
Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitisation

Product:
Remarks: Based on available data, the classification criteria are not met.

Components:
Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:
Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.

Components:
Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Genotoxicity in vitro	:	Test Type: Ames test Concentration: 0, 8, 40, 20 and 1 000µ Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
	:	Test Type: Chinese Hamster Ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative
	:	Test Type: Unscheduled DNA synthesis (UDS) Result: negative
Genotoxicity in vivo	:	Test Type: In vivo micronucleus test Species: Mouse Dose: 0, 15, 150 and 1500 mg/kg bw/a Result: negative
Germ cell mutagenicity- Assessment	:	Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment	:	Based on available data, the classification criteria are not met.

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Effects on fertility	:	Species: Rat Dose: 0, 30, 300 and 3200 mg/kg bw/ General Toxicity - Parent: No observed adverse effect level: < 30 mg/kg bw/day
Reproductive toxicity - Assessment	:	No toxicity to reproduction No effects on or via lactation

STOT - single exposure

Product:

Assessment: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:
Species: Dog, male and female
NOAEL: 2 mg/kg
Application Route: Oral
Exposure time: 364 d
Dose: 0, 2, 10, 50 and 250 mg/g bw/d
Target Organs: Liver, spleen

Aspiration toxicity

Product:

Technical impossibility to obtain the data

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	Remarks: Information refers to the main component.
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: Information refers to the main component.
Toxicity to algae	:	Remarks: Information refers to the main component.

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Toxicity to fish	:	LC50 (Cyprinodon sp. (minnow)): > 0.13 mg/l Exposure time: 96 h Test Type: flow-through test GLP: yes LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.2 mg/l Exposure time: 96 h GLP: yes LC50 (Brachydanio rerio (zebrafish)): > 0.2 mg/l

Exposure time: 96 h
GLP: yes

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.2 mg/l
Exposure time: 96 h
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0026 mg/l
Exposure time: 48 h
GLP: yes

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 0.3 mg/l
Exposure time: 120 h
GLP: yes

EC50 (Selenastrum capricornutum (green algae)): > 0.2 mg/l
Exposure time: 72 h
GLP: yes

NOEC (Selenastrum capricornutum (green algae)): 0.2 mg/l
Exposure time: 72 h
GLP: yes

M-Factor (Acute aquatic toxicity) : 100

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.00004 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1,000

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Biodegradability : Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Diflubenzuron; 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl) urea:

Bioaccumulation : Bioconcentration factor (BCF): 320

Partition coefficient: n- : log Pow: 3.89

octanol/water

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

ADN : UN 3077

ADR : UN 3077

RID : UN 3077

IMDG : UN 3077

IATA : UN 3077

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(Diflubenzuron)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron)

IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., Environmentally hazardous substance, solid, n.o.s. (Diflubenzuron)

14.3 Transport hazard class(es)

ADN : 9

ADR : 9

RID : 9

IMDG : 9

IATA : 9

14.4 Packing group

ADN

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9

ADR

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA

Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956

Arysta LifeScience Netherlands B.V.
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The Netherlands

Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
E1	ENVIRONMENTAL HAZARDS	100 t	200 t

15.2 Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H-Statements

H373 : May cause damage to organs through prolonged or repeated exposure if swallowed.
H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
STOT RE : Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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.

GB / EN

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