

**CADOU STAR WG58 10X1KG BOX IE**Version 5 / GB
1020000076421/9
Revision Date: 03.12.2009
Print Date: 17.03.2010**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name CADOU STAR WG58 10X1KG BOX IE
Product code (UVP) 05396646
Usage Herbicide
Company Bayer CropScience Limited
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
Great Britain

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2. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

Harmful if swallowed.
Irritating to eyes.
May cause sensitization by skin contact.
Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Possible risk of harm to the unborn child.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Water dispersible granules (WG)
Flufenacet/Isoxaflutole 48:10 % w/w

Hazardous components

Chemical Name	CAS-No. / EC-No.	Symbol(s)	R-phrases(s)	Concentration [%]
Flufenacet	142459-58-3	Xn, N	R22, R43, R48/22, R50/53	48.00
Isoxaflutole	141112-29-0	Xn, N	R50/53, R63	10.00
Sulphonated aromatic polymer, sodium salt		Xi	R36/38	> 1.00 - < 20.00
Citric acid	77-92-9 201-069-1	Xi	R36	> 1.00 - < 20.00
Naphthalene and alkyl	68425-94-5	Xi	R41	> 10.00

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naphthalene sulfonic acids formaldehyde condensate, sodium salt				
Amorphous silica	63231-67-4			> 1.00
Kaolin	1332-58-7 310-194-1			> 1.00

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES**General advice**

Move out of dangerous area. Remove contaminated clothing immediately and dispose of safely. Place and transport victim in stable position (lying sideways).

Inhalation

Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact

In case of contact with skin wash off immediately with polyethylene glycol 400, then with plenty of water. Call a physician or poison control center immediately.

Eye contact

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

Notes to Physician**Treatment**

Treat symptomatically.

In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.

In case of methaemoglobinemia, oxygen and specific antidotes (methylene blue/ toluidine blue) should be given.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Water spray
Carbon dioxide (CO₂)
Foam
Sand

Specific hazards during fire fighting

In the event of fire the following may be released:

Hydrogen cyanide (hydrocyanic acid)
Hydrogen fluoride (HF)
Carbon monoxide (CO)
nitrogen oxides (NO_x)
Sulphur oxides



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Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Contain the spread of the fire-fighting media.

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with spilled product or contaminated surfaces.

Remove all sources of ignition.

Use personal protective equipment.

Environmental Precautions

Do not allow to get into surface water, drains and ground water.

If spillage enters drains leading to sewage works inform local water company immediately.

If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

Methods for cleaning up

Use mechanical handling equipment.

Keep in suitable, closed containers for disposal.

Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

Dust may form explosive mixtures with air.

Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a dry, cool and well-ventilated place.

Store in a place accessible by authorized persons only.

Store in original container.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Temperature tolerance	min.	max.
	-20 °C	40 °C

Suitable materials

Aluminium composite film (min. 0,007 mm Aluminium)

Coextruded containers with an internal barrier layer made of polyamide (PA)

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Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Flufenacet	142459-58-3	0.47 mg/m ³ (TWA)		OES BCS*
Isoxaflutole	141112-29-0	1.4 mg/m ³ (TWA)		OES BCS*
Amorphous silica (Inhalable dust.)	63231-67-4	6 mg/m ³ (TWA)	2007	EH40 WEL
Amorphous silica (Respirable dust.)	63231-67-4	2.4 mg/m ³ (TWA)	2007	EH40 WEL
Kaolin (Respirable dust.)	1332-58-7	2 mg/m ³ (TWA)	2007	EH40 WEL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

- Respiratory Protection** Wear respirator with a particle filter mask (protection factor 10) conforming to European Norm EN149FFP2 or EN140P2 or equivalent.
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
- Hand protection** Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.
- Eye protection** Wear goggles conforming to EN166 (Field of Use 5 or equivalent).
- Skin and body protection** Wear standard coverall and type 3 suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
- Hygiene measures**
Avoid contact with skin, eyes and clothing.
Keep working clothes separately.
Wash hands before breaks and immediately after handling the product.
Wash hands immediately after work, if necessary take a shower.
Remove soiled clothing immediately and clean thoroughly before using again.
Garments that cannot be cleaned must be destroyed (burnt).

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Protective measures

If product is handled while not enclosed, and if contact may occur:
Complete suit protecting against chemicals**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	water-dispersible granules
Colour	brown
Odour	weak, characteristic

Safety data

pH	3.0 - 4.0 at 1 % (23 °C)
Minimum Ignition Energy	> 100 - < 300 mJ
Dust Explosion Class	capable of causing a dust explosion (modified Hartmann tube)
Water solubility	dispersible
Impact Sensitivity	not impact-sensitive
Combustion number	CN3 Local combustion without spreading at 20 °C
Explosivity	Not explosive.

10. STABILITY AND REACTIVITY

Conditions to Avoid	Extremes of temperature and direct sunlight.
Thermal decomposition	> 160 °C , Heating rate: 5 K/min
Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Hazardous Reactions	incapable of deflagration

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) 863 mg/kg
Acute Dermal Toxicity	LD50 (rat) > 2,000 mg/kg
Skin Irritation	No skin irritation. (rabbit)
Eye Irritation	Irritating to eyes. (rabbit)
Sensitization	sensitizing (guinea pig) OECD Test Guideline 406, Buehler test

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Toxicity to Fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 5.2 mg/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Water flea (<i>Daphnia magna</i>)) 52.3 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (<i>Desmodesmus subspicatus</i>) 1.48 mg/l Growth rate; Exposure time: 72 h
Toxicity to algae	EC50 (<i>Lemna gibba</i> (duckweed)) 0.0054 mg/l Exposure time: 336 h The value mentioned relates to the active ingredient isoxaflutole.
Toxicity to algae	EC50 (<i>Lemna gibba</i> (duckweed)) 0.0318 mg/l Exposure time: 168 h The value mentioned relates to the active ingredient flufenacet.

13. DISPOSAL CONSIDERATIONS**Product**

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.

Add washings to sprayer at time of filling.

Dispose of empty and cleaned packaging safely.

Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.

Return large containers to supplier.

Follow advice on product label and/or leaflet.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION**ADR/RID/ADNR**

UN-Number	3077
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FLUFENACETE, ISOXAFLUTOLE MIXTURE)

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Tunnel Code E

This classification is in principle not valid for carriage by tank vessel on inland waterways.
Please refer to the manufacturer for further information.

IMDG

UN-Number	3077
Labels	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine Pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FLUFENACETE, ISOXAFLUTOLE MIXTURE)

IATA

UN-Number	3077
Labels	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FLUFENACETE, ISOXAFLUTOLE MIXTURE)

UK 'Carriage' Regulations

UN-Number	3077
Labels	9
Packaging group	III
Hazard no.	90
Emergency action code	2Z
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FLUFENACETE, ISOXAFLUTOLE MIXTURE)

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3 and any subsequent amendments.

Classification:

Labelling according to EC Directives

Hazardous components which must be listed on the label:

- Flufenacet
- Isoxaflutole

Symbol(s)

Xn	Harmful
N	Dangerous for the environment

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R-phrases(s)	
R22	Harmful if swallowed.
R36	Irritating to eyes.
R43	May cause sensitization by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.
S-phrases(s)	
S35	This material and its container must be disposed of in a safe way.
S36/37	Wear suitable protective clothing and gloves.
S57	Use appropriate container to avoid environmental contamination.

CLASSIFICATION ACCORDING TO SPECIFIC UK REGULATIONS:

The labelling information below is that which has been approved under 'The Control of Pesticides Regulations 1986' and/or 'Part III of the Food and Environment Protection Act 1985' and/or 'Plant Protection Product Regulations 1999' and any subsequent amendments and may differ from that indicated by any toxicological and/or other testing otherwise indicated in this 'Safety Data Sheet'.

Symbol(s)	
Xn	Harmful
N	Dangerous for the environment
R-phrases(s)	
R22	Harmful if swallowed.
R36	Irritating to eyes.
R43	May cause sensitization by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.
S-phrases(s)	
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S35	This material and its container must be disposed of in a safe way.
S36/37	Wear suitable protective clothing and gloves.
S57	Use appropriate container to avoid environmental contamination.

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use.

Further information

WHO-classification: II (Moderately hazardous)

16. OTHER INFORMATION**Further information**

Text of R-phrases mentioned in Section 3

R22	Harmful if swallowed.
R36	Irritating to eyes.



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R36/38	Irritating to eyes and skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.