



**BARCELO GR2**

Version 1 / IND  
102000028910

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Revision Date: 14.11.2016  
Print Date: 24.01.2017

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

**Trade name** BARCELO GR2  
**Product code (UVP)** 81682593

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

**Use** Insecticide

**1.3 Details of the supplier of the safety data sheet**

**Supplier** Bayer CropScience Limited  
Bayer House, Central Avenue,  
Hiranandani Estate  
400607 Thane (W)  
Maharashtra  
India

**Telephone** +91-22-25311030 / 25311234

**Telefax** +91-22-25455116

**1.4 Emergency telephone no.**

**Indian Emergency Number** 022-25311885 (24 hours/day)

**Global Incident Response Hotline (24h)** +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Eye irritation: Category 2

H319 Causes serious eye irritation.

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

**2.2 Label elements**

**Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Diflubenzuron



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**Signal word:** Warning

**Hazard statements**

- H319 Causes serious eye irritation.
- H410 Very toxic to aquatic life with long lasting effects.
- EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

**Precautionary statements**

- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- + P338
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P501 Dispose of contents/container in accordance with local regulation.

**2.3 Other hazards**

Risk of dust explosion.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

**Chemical nature**

Granule (GR)  
Diflubenzuron 2%

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Diflubenzuron	35367-38-5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	2.0
Citric acid	77-92-9	Eye Irrit. 2, H319	> 20

**Further information**

Diflubenzuron	35367-38-5	M-Factor: 100 (acute)
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For the full text of the H-Statements mentioned in this Section, see Section 16.



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**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If eye irritation or redness persists, see an ophthalmologist.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

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

**Symptoms** Skin, eye and mucous membrane irritation

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

**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. There is no specific antidote.

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**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand  
**Hazchem Code** 2Z

**5.2 Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire., Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

**5.3 Advice for firefighters**

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. 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.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up** Avoid dust formation. Use mechanical handling equipment. Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

**Additional advice** Check also for any local site procedures.

**6.4 Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Advice on safe handling** No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Avoid dust formation.

**Advice on protection against fire and explosion** Dust may form explosive mixture in air.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**Suitable materials** HDPE (high density polyethylene)

**7.3 Specific end use(s)** Refer to the label and/or leaflet.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

No control parameters known.

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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 4) conforming to European norm EN149FFP1 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 of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and 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 coveralls and Category 3 Type 5 suit. If there is a risk of significant exposure, consider a higher protective type 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. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

<b>Form</b>	granular
<b>Colour</b>	slightly yellow
<b>Bulk density</b>	0.80 - 0.95 g/ml
<b>Water solubility</b>	miscible
<b>Partition coefficient: n-octanol/water</b>	Diflubenzuron: log Pow: 3.89
<b>Dust content</b>	Content: <= 0.1 %

**9.2 Other information**

Further safety related physical-chemical data are not known.



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**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

**Thermal decomposition** Stable under normal conditions.

**10.2 Chemical stability** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.

**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.

**10.5 Incompatible materials** Strong acids, Strong bases, Store only in the original container.

**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute oral toxicity** LD50 (Rat) > 5,000 mg/kg

**Acute inhalation toxicity** LC50 (Rat) > 5.12 mg/l  
Exposure time: 4 h  
Determined in the form of a respirable fine dust.

**Acute dermal toxicity** LD50 (Rat) > 5,000 mg/kg

**Skin irritation** Slight irritant effect - does not require labelling. (Rabbit)

**Eye irritation** Irritating to eyes. (Rabbit)

**Sensitisation** Non-sensitizing. (Mouse)  
OECD Test Guideline 429, local lymph node assay (LLNA)

**Assessment STOT Specific target organ toxicity – repeated exposure**

Diflubenzuron did not cause specific target organ toxicity in experimental animal studies.

**Assessment mutagenicity**

Diflubenzuron was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Diflubenzuron was not carcinogenic in lifetime feeding studies in rats and mice.

**Assessment toxicity to reproduction**

Diflubenzuron did not cause reproductive toxicity in a two-generation study in rats.

**Assessment developmental toxicity**

Diflubenzuron did not cause developmental toxicity in rats and rabbits.

**Further information**

No further toxicological information is available.

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**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Toxicity to fish** LC50 (Cyprinodon sp. (minnow)) > 0.13 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient.

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 0.003 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient.

**Toxicity to aquatic plants** IC50 (Raphidocelis subcapitata (freshwater green alga)) > 0.3 mg/l  
Exposure time: 72 h  
The value mentioned relates to the active ingredient.

**12.2 Persistence and degradability**

**Biodegradability** Diflubenzuron:  
Not rapidly biodegradable

**Koc** Diflubenzuron: Koc: 1983 - 6918

**12.3 Bioaccumulative potential**

**Bioaccumulation** Diflubenzuron: Bioconcentration factor (BCF) 320  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Diflubenzuron: Slightly mobile in soils

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment** Diflubenzuron: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

**12.6 Other adverse effects**

**Additional ecological information** No other effects to be mentioned.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**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.

**Contaminated packaging** Not completely emptied packagings should be disposed of as hazardous waste.

**Legal basis**

**Waste key in accordance with Schedule I of the Hazardous Waste Rules, 2008 as amended (India - EP Act):**



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29.1 Process wastes/residues  
29.3 Date-expired and off-specification pesticides

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**SECTION 14: TRANSPORT INFORMATION**

**ADR/RID/ADN**

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIFLUBENZURON MIXTURE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Hazchem Code	2Z
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**

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIFLUBENZURON MIXTURE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES
Segregation group according to 5.4.1.5.11.1	IMDG SEGREGATION GROUP 1 - ACIDS

**IATA**

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIFLUBENZURON MIXTURE )
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

**14.6 Special precautions for user**

See sections 6 to 8 of this Safety Data Sheet.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

No transport in bulk according to the IBC Code.

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**SECTION 15: REGULATORY INFORMATION**

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





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**Further information**

WHO-classification: U (Unlikely to present acute hazard in normal use)

**Labeling according to Insecticide Rules 1971 as amended. (INDIA)**



Class III: Moderately toxic  
Colour: bright blue  
Danger!  
Keep out of the reach of children.

**SECTION 16: OTHER INFORMATION**

**Text of the hazard statements mentioned in Section 3**

- H319 Causes serious eye irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

**Abbreviations and acronyms**

- 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
- ATE Acute toxicity estimate
- CAS-Nr. Chemical Abstracts Service number
- Conc. Concentration
- EC-No. European community number
- ECx Effective concentration to x %
- EINECS European inventory of existing commercial substances
- ELINCS European list of notified chemical substances
- EN European Standard
- EU European Union
- IATA International Air Transport Association
- IBC International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
- ICx Inhibition concentration to x %
- IMDG International Maritime Dangerous Goods
- LCx Lethal concentration to x %
- LDx Lethal dose to x %
- LOEC/LOEL Lowest observed effect concentration/level
- MARPOL MARPOL: International Convention for the prevention of marine pollution from ships
- N.O.S. Not otherwise specified
- NOEC/NOEL No observed effect concentration/level
- OECD Organization for Economic Co-operation and Development
- RID Regulations concerning the International Carriage of Dangerous Goods by Rail
- TWA Time weighted average
- UN United Nations
- WHO World health organisation

# SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006



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The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

**Reason for Revision:** The following sections have been revised: Section 4: First Aid Measures. Section 11: Toxicological Information. Section 12. Ecological information.

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