

# Safety data sheet

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BASF Safety Data Sheet  
Date / Revised: 31.01.2013  
Product: **KUMULUS® DF**

(Ref.: ID no. 30275589/SDS\_CPA\_EU/EN; Version 5.0; 31.01.2013)

## 1. Identification of the substance/mixture and of the company/undertaking

### Product identifier

**KUMULUS® DF**

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

Relevant identified uses: crop protection product, fungicide.

### Details of the supplier of the safety data sheet

Company:

BASF New Zealand Limited  
Level 4, 4 Leonard Isitt Drive, Auckland Airport, Auckland 2022  
P.O. Box 407, Auckland 1140  
Phone: + 64 9 255 4300  
Fax: + 64 9 255 4307  
E-mail address: reception@basf-nz.co.nz

### Emergency telephone number

**National Poisons Centre: 0800764 766**

BASF Emergency Advice Number: 0800 944 955 (24 Hour Advice in an Emergency Only)

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## 2. Hazards Identification

Hazard Classification:

6.4A, 9.1D

Priority Identifier:

WARNING. Keep out of reach of children

Secondary Identifiers:

6.4A HARMFUL. May cause eye irritation.

9.1D Designed for biocidal action against plant pathogenic fungi.

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

### 3. Composition/Information on Ingredients

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

##### Chemical nature

Crop protection product, fungicide, water dispersible granules (WG).

##### Hazardous ingredients

Sulphur  
Content (W/W): 80 %  
CAS Number: 7704-34-9  
EC-Number: 231-722-6  
REACH registration number: 01-2119422098-42  
INDEX-Number: 016-094-00-1

### 4. First-Aid Measures

#### 4.1 Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink plenty of water.

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

Symptoms: No significant reaction of the human body to the product known.

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

Treatment: Symptomatic treatment (decontamination, vital functions).

### 5. Fire-Fighting Measures

#### 5.1. Extinguishing media

Suitable extinguishing media:  
Water spray, foam, dry powder.

Unsuitable extinguishing media for safety reasons:

Carbon dioxide

#### 5.2. Special hazards arising from the substance or mixture

Carbon monoxide, carbon dioxide, sulphur oxides.

The substances/groups of substances mentioned can be released in case of fire.

### 5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with local regulations.

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## 6. Accidental Release Measures

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

Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

### 6.2 Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

### 6.3 Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up.

Avoid raising dust. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labelled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

### 6.4 Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## 7. Handling and Storage

### 7.1 Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

APPROVED HANDLER:

Approved handlers are not required for this product.

RECORD KEEPING

Written records of use are recommended.

Note: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

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

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage stability:

Storage duration: 60 Months

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<b>AGGREGATE STORAGE VOLUME THRESHOLDS:</b> When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.						
<b>Location Certificate*:</b>	<b>Hazardous Atmosphere Zone*:</b>	<b>Fire Extinguishers:</b>	<b>Signage [Hazard Class &amp; Emergency Action]:</b>	<b>Emergency Information:</b>	<b>Emergency Response Plan:</b>	<b>Secondary Containment:</b>
NA	NA	NA	10,000 kg	50 kg	10,000 kg	10,000 kg
* Note: Farms $\geq$ 4 ha are exempt but with controls						
<b>DO NOT STORE OR LOAD WITH:</b> Class 1 Explosive			<b>SEGREGATE FROM:</b> Foodstuffs and Food Containers			
<b>Segregation:</b> In store separate by at least 5 metres, on transport separate by at least 3 metres, in both cases horizontally. On vehicles a segregation device may be used: Check the Land Transport Rule Dangerous Goods, Rule 45001 for additional information. Sea transport may require additional segregation. Refer to NZS5433 Sea Segregation for details.						

### 7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Personal protective equipment

Respiratory protection:  
Respiratory protection not required.

Hand protection:  
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other.

Eye protection:  
Safety glasses with side-shields (frame goggles) (e.g. EN 166).

Body protection:  
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

Form:	low dusting fine granules
Colour:	grey-brown
Odour:	faint specific odour, sulphur-like
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 7 – 9 (CIPAC standard water D, 1 %(m), 20 °C) (pH Meter)
Melting point:	approx. 112 - 116 °C
Boiling point:	The product has not been tested.
Flash point:	not applicable
Evaporation rate:	not applicable
Flammability:	not flammable
Lower explosion limit:	approx. 25 g/m3 (VDI 2263)
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Vapour pressure:	The product has not been tested.
Density:	approx. 1.88 g/cm3 (20 °C)
Relative vapour density (air):	not determined
Solubility in water:	dispersible
Partitioning coefficient n-octanol/water (log Kow):	not applicable
Self ignition:	Temperature: 246 °C (Method: Directive 92/69/EEC, A.16)
Thermal decomposition:	165 °C, 50 kJ/kg (DSC (OECD 113)) 265 °C, 30 kJ/kg (DSC (OECD 113))
Viscosity, dynamic:	not applicable
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating

### 9.2 Other information

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

## 10. Stability and Reactivity

### 10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.2 Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3 Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.4 Conditions to avoid

See SDS section 7 - Handling and storage.

### 10.5 Incompatible materials

Substances to avoid:

Strong acids, strong bases, strong oxidizing agents.

### 10.6 Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

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## 11. Toxicological Information

### 11.1 Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:

LD50 rat (oral): > 2,200 mg/kg (OECD Guideline 401)

No mortality was observed.

LC50 rat (by inhalation): > 5.4 mg/l 4 h (OECD Guideline 403)

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

No mortality was observed.

#### Irritation

Assessment of irritating effects:

Not irritating to the eyes. Not irritating to the skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

#### Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 406)

#### Germ cell mutagenicity

Assessment of mutagenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

#### Carcinogenicity

Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

#### Reproductive toxicity

Assessment of reproduction toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

### Developmental toxicity

#### Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

#### Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organotoxicity was observed after repeated administration to animals.

### Other relevant toxicity information

Misuse can be harmful to health.

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## 12. Ecological Information

### 12.1 Toxicity

#### Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

#### Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss*

#### Aquatic invertebrates:

EC50 (48 h) > 1,000 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

#### Aquatic plants:

EC50 (72 h) 290 mg/l, *Ankistrodesmus bibraianus* (OECD Guideline 201)

#### Microorganisms/Effect on activated sludge:

EC50 (18 h) > 2,000 mg/l, *Pseudomonas putida* (static)

### 12.2 Persistence and degradability

#### Assessment biodegradation and elimination (H<sub>2</sub>O):

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Information on: sulphur

#### Assessment biodegradation and elimination (H<sub>2</sub>O):

Inorganic product which cannot be eliminated from water by biological purification processes.

### 12.3 Bioaccumulative potential

#### Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Information on: sulfur

#### Bioaccumulation potential:

Accumulation in organisms is not to be expected. The product will not be readily bioavailable due to its consistency and insolubility in water.

## 12.4 Mobility in soil

Assessment transport between environmental compartments:  
The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: sulphur*

*Assessment transport between environmental compartments:*

*Study scientifically not justified.*

## 12.5 Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

## 12.6 Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

## 12.7 Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## 13. Disposal Considerations

Container:

Empty bag into the spray tank. Crush empty bag and bury in suitable landfill.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Product:

Dispose of this product only by using according to the label or at an approved landfill or at an approved facility. Do NOT burn product. Do NOT contaminate water with product or used container.

### 13.1. Waste treatment methods

Waste product/package may be sent to a suitable incineration plant, observing local regulations.

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## 14. Transport Information

Commercial transport:

Not classified as Dangerous Goods for Land/rail (ADR/RID), sea (IMDG/GGVSee) and air transport (ICAO/IATA).

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## 15. Regulatory Information

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

For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)



## 15.2 Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

## 15.3 NZ Regulations

Approved pursuant to the HSNO Act 1996, Code HSR000741.  
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions.

Registered pursuant to the ACVM Act 1997, Nos. P3493.  
See [www.foodsafety.govt.nz/acvm](http://www.foodsafety.govt.nz/acvm) for registration conditions.

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## 16. Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the products properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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