

# Safety data sheet

BASF Safety Data Sheet  
Date / Revised: 31.05.2017  
Product: **KUMULUS® DF**

Ref. ID no. 30275589/SDS\_CPA\_00/EN. Version: 2.1 (according to UN GHS 4th rev.)

## 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)

## 2. Hazards Identification

### Classification of the substance or mixture

Hazard Classification according to HSNO Act 1996

6.4A, 9.1D

### Label elements

Pictogram:

Not required.

Priority Identifier (Signal Word):

Not required.

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Secondary Identifiers:

Hazard Statements:

H320 Causes eye irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

### Other hazards

According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

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## 3. Composition/Information on Ingredients

### Substances

Not applicable

### Mixtures

Chemical nature

Crop protection product, fungicide, water dispersible granules.

Hazardous ingredients

sulphur

Content (W/W): 80 %

CAS Number: 7704-34-9

EC-Number: 231-722-6

INDEX-Number: 016-094-00-1

Skin Corr./Irrit. 2

H315

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## 4. First-Aid Measures

### Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

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.

On ingestion:

Rinse mouth and then drink plenty of water.

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

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

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

Treatment: Treat according to symptoms (decontamination, vital functions).

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## 5. Fire-Fighting Measures

**Extinguishing media**

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

Unsuitable extinguishing media for safety reasons:  
Carbon dioxide

**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.

**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 official regulations.

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## 6. Accidental Release Measures

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

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

**Environmental precautions**

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

**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.

**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

### 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. Remove contaminated clothing and protective equipment before entering eating areas.

#### APPROVED HANDLER:

Approved handlers as defined under the HSNO Act 1996 are not required for this product. Refer to the product label for handling precautions and directions for use.

#### TRACKING:

Not required.

#### RECORD KEEPING:

Records of use should be kept.

#### 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.

### Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

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

#### Storage stability:

Storage duration: 60 Months

Keep container tightly closed and dry.

#### Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

**AGGREGATE STORAGE VOLUME THRESHOLDS:** 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.

| Location Certificate*: | Hazardous Atmosphere Zone*: | Fire Extinguishers: | Signage [Hazard Class & Emergency Action]: | Emergency Information: | Emergency Response Plan: | Secondary Containment: |
|------------------------|-----------------------------|---------------------|--|------------------------|--------------------------|------------------------|
| NA                     | NA                          | NA                  | 10,000 kg                                  | 3 kg                   | 10,000 kg                | 10,000 kg              |

\* Note: Farms  $\geq$  4 ha are exempt but with controls

#### DO NOT STORE OR LOAD WITH:

Class 1 Explosive

#### SEGREGATE FROM:

Foodstuffs and Food Containers

**Segregation:** 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.

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

### 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

### Control parameters

#### Components with occupational exposure limits

7704-34-9: sulfur

8061-51-6: lignosulfonic acid, sodium salt

### 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) etc.

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. Keep away from food, drink and animal feeding stuffs.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

|  |  |
|--|--|
| Form:  | solid  |
| Colour:  | grey brown to 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)<br>(pH Meter)  |
| Melting point:   | approx. 112 - 116 °C   |
| Boiling point:   | The product is a non-volatile solid.   |
| Flash point:   | not applicable   |
| Evaporation rate:                                      | not applicable   |
| Flammability:  | not flammable  |
| Lower explosion limit:                                 | approx. 25 g/m <sup>3</sup> (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/cm <sup>3</sup> (20 °C)   |
| Relative vapour density (air):                         | not applicable   |
| Solubility in water:                                   | dispersible  |
| Partitioning coefficient<br>n-octanol/water (log Kow): | not applicable   |
| Self-ignition:   | Temperature: 246 °C (Method: Directive 92/69/EEC, A.16)  |

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Thermal decomposition: 165 °C, 50 kJ/kg (DSC (OECD 113)) (onset temperature)  
265 °C, 30 kJ/kg (DSC (OECD 113))  
(onset temperature) Not a substance liable to self-decomposition  
according to UN transport regulations, class 4.1.

Viscosity, dynamic: not applicable, the product is a solid

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

#### **Other information**

Self-heating ability: Not tested on account of the low melting-point.

Bulk density: 870 - 953 kg/m<sup>3</sup>

## **10. Stability and Reactivity**

### **Reactivity**

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

### **Chemical stability**

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

### **Possibility of hazardous reactions**

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

### **Conditions to avoid**

See SDS section 7 - Handling and storage.

### **Incompatible materials**

Substances to avoid:  
Strong acids, strong bases, strong oxidizing agents.

### **Hazardous decomposition products**

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

## **11. Toxicological Information**

### **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.

### Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

### 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 organ toxicity was observed after repeated administration to animals.

#### Aspiration hazard

No aspiration hazard expected.

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

#### Other relevant toxicity information

Misuse can be harmful to health.

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## 12. Ecological Information

### 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)

### 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):

Not applicable for inorganic substances.

### 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: sulphur*

*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.*

### Mobility in soil

Assessment transport between environmental compartments:

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

*Information on: sulfur*

*Assessment transport between environmental compartments:*



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*Adsorption in soil: Study scientifically not justified.*

### 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.

### Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

### Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## 13. Disposal Considerations

Container:

Empty bag completely into the spray tank. Burn empty bag in a suitable incinerator if circumstances, especially wind direction, permit. Otherwise crush 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.

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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):

|                             |                |
|-----------------------------|----------------|
| UN number:                  | Not applicable |
| UN proper shipping name:    | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group:              | Not applicable |
| Marine pollutant:           | Not applicable |
| HAZCHEM:                    | 2[Z]           |

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## 15. Regulatory Information

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

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

#### **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

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Skin Corr./Irrit. Skin corrosion/irritation  
H315 Causes skin irritation.

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. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

| Vertical lines in the left-hand margin indicate an amendment from the previous version.