

# Safety Data Sheet

Page 1 of 11

BASF Safety Data Sheet

Date / Revised: 22.09.2023

Version 5.0

Product: **KUMULUS® DF**

(Ref ID no. (30275589/SDS\_CPA\_NZ/EN))

## 1. Identification

### Product identifier

**KUMULUS® DF**

### Recommended uses and restrictions on use (if any)

#### Recommended use:

crop protection product, fungicide.

#### Restricted use:

not applicable

### Manufacturer / Supplier

BASF New Zealand Limited  
5E City Works Depot,  
77 Cook Street  
Auckland 1010  
NEW ZEALANDPhone: + 64 9 255 4300  
0800 932 273

E-mail address: reception@basf-nz.co.nz

### Emergency telephone number

National Poisons Centre: 0800 764 766

BASF Emergency Advice Number: 0800 944 955 (24 hour advice in an emergency only)

## 2. Hazard Identification

### Classification of the substance or mixture

Skin irritation : Category 2

Designed for biocidal action

### GHS Label Elements, including Precautionary Statements:

#### Signal Word:

WARNING.

#### Pictograms:



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GHS Hazard Statements

H315 : Causes skin irritation.  
 : Designed for biocidal action.

GHS Precautionary Statements (Prevention)

P103 : Read label before use.  
 P264 : Wash hands and face thoroughly after handling.  
 P280 : Wear protective gloves, protective clothing, eye/face protection.

GHS Precautionary Statements (Response)

P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.  
 P321 : Specific treatment; specify a cleansing agent if appropriate.  
 P332 + P313 : If skin irritation occurs: Get medical advice/attention.  
 P362 : Take off contaminated clothing and wash before reuse.

GHS Precautionary Statements (Storage)

No specific storage requirements.

GHS Precautionary Statements (Disposal):

P501 : Dispose of contents/container to hazardous or special waste collection point.  
 Information regarding disposal considerations can be found in section 13.

**Other hazards**

No other hazards known.

See section 12 - Results of PBT and vPvB assessment.

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

**3. Composition/Information on Ingredients****Substances**

Not applicable

**Mixtures**Hazardous ingredients (GHS)

According to UN GHS criteria

sulfur

Content (W/W):	80 %
CAS Number:	7704-34-9

Lignosulfonic acid, sodium salt

Content (W/W):	<20%
CAS Number:	8061-51-6

**4. First-Aid Measures****Description of necessary first aid measures**General advice:

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 200-300 ml of water.

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

Information, i.e. additional information on symptoms and effects may be included in the GHS labelling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far.

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

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

Medical advice:

Contact the National Poisons and Hazardous Chemicals Information centre.  
Phone 0800 POISON (0800 764 766).

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**5. Fire-Fighting Measures****Suitable extinguishing media**

Water spray, dry powder, foam

**Unsuitable extinguishing media for safety reasons**

Carbon dioxide

**Specific hazards**

carbon monoxide, carbon dioxide, sulfur oxides

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

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.

**Special protective equipment for fire-fighters**

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

**Precautions for fire-fighters**

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. Do not breathe vapour/spray.  
Use personal protective clothing.  
Avoid contact with the skin, eyes and clothing.

### Environmental precautions

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

### 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.

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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.

### Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions:

Keep only in the original container. Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage stability: 60 months.

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.

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## 8. Exposure Controls/Personal Protection

### Control parameters

Occupational exposure limits

No occupational exposure limits known.

### Engineering controls

Maintain air concentrations below occupational exposure standards.

### Personal protective equipment

Respiratory protection:

Respiratory protection is not required.

Hand protection:

Suitable chemical resistant safety gloves (EN 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374-1): 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.

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## 9. Physical and Chemical Properties

Form:	Solid
Colour:	Grey brown to brown
Odour:	Faint specific odour, sulfur-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)
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 highly flammable
Lower explosion limit:	Approx. 25 g/m <sup>3</sup>
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.
Self-ignition temperature:	246°C
Self heating ability:	Not tested on account of the low melting-point
Vapour pressure:	The product has not been tested.
Density:	Approx. 1.88 g/cm <sup>3</sup> (20°C)
Bulk density:	870 – 953 kg/m <sup>3</sup>
Relative vapour density (air):	Not applicable
Solubility in water:	Dispersible
Partitioning coefficient n-octanol/water (log Kow):	Not applicable
Thermal decomposition:	165°C, 50 kJ/kg (onset temperature) 265°C, 30 kJ/kg (onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, Class 4.1
Explosion hazard:	Not explosive
Fire promoting properties:	Not fire-propagating
Viscosity, dynamic:	Not applicable, the product is a solid

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## 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.

Thermal decomposition: 165°C, 50 kJ/kg (onset temperature)

Thermal decomposition: 265°C, 30 kJ/ kg (onset temperature)

Thermal decomposition: Not a substance liable to self-decomposition according to UN transport regulations, Class 4.1

### Incompatible materials / Substances to avoid

Strong acids, strong bases, strong oxidizing agents

### Hazardous decomposition products

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

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## 11. Toxicological Information

### Acute toxicity

#### Assessment of acute toxicity:

Virtually non-toxic after single ingestion. Virtually non-toxic after a single skin contact. Virtually non-toxic by inhalation.

#### Experimental/calculated data:

LD50 rat (oral): >2,200 mg/kg  
No mortality was observed.

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

LD50 rat (dermal): >2,000 mg/kg  
No mortality was observed.

### Skin Corrosion / Irritation

#### Assessment of irritating effects:

Not irritating to the skin.

#### Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant

### Serious Eye Damage / Irritation

#### Assessment of irritating effects:

Not irritating to the eyes

#### Experimental/calculated data:

Serious eye damage/irritation rabbit: non-irritant.

### **Respiratory or Skin sensitization**

#### Assessment of sensitization:

There is no evidence of a skin-sensitising potential.

#### Experimental/calculated data:

Maximisation test - guinea pig: skin sensitising effects were not observed in animal studies.

### **Germ cell mutagenicity**

#### Assessment of mutagenicity:

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

### **Carcinogenicity**

#### Assessment of carcinogenicity:

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

### **Reproductive toxicity**

#### Assessment of reproduction toxicity:

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

### **Developmental toxicity**

#### Assessment of teratogenicity:

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

### **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:

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

### **Aspiration hazard**

No aspiration hazard expected.

### **Other relevant toxicity information**

Misuse can be harmful to health.

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## 12. Ecological Information

### Ecotoxicity - Aquatic

#### 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*

#### Aquatic plants:

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

#### Micro-organisms / Effect on activated sludge:

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

### Ecotoxicity - Terrestrial

#### Assessment of terrestrial toxicity:

There is a high probability that the substance is not harmful to terrestrial vertebrates.

The product has not been tested. The statement has been derived from the properties of the active ingredient.

#### Toxicity to birds:

Acute oral LD50: >2,000 mg ai/l, *Collinus virginianus*, Sulphur

#### Toxicity to soil organisms:

Acute LC50 (14d) >2,000 mg ai/kg, *Eisenia fetida*, Sulphur

#### Toxicity to Pollinators:

Acute LD50 (48h, oral): >106.8 µg ai/bee, *Apis mellifera*, Sulphur

Acute LD50 (48h, contact): >100 µg ai/bee, *Apis mellifera*, Sulphur

### Persistence and degradability

#### Assessment biodegradation and elimination (H2O):

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

Information on: Sulfur

#### Assessment biodegradation and elimination (H2O):

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: Sulfur

#### Bioaccumulation potential:

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



### 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: sulfur

#### Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

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

#### Other ecotoxicological advice:

Do not discharge product into the environment without control.

Do not apply onto or into water.

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## 13. Disposal Considerations

### Container:

Triple rinse empty container and add rinsate to the spray tank. Recycle through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). Do not use container for any other purpose.

### Product:

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

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

### Contaminated Packaging:

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

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## 14. Transport Information

### Commercial transport:

Not classified as dangerous good(s) for Land/rail (ADR/RID), sea (IMDG) and air transport (ICAO/IATA):

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es) / UN DG Class:	Not applicable
Packing group:	Not applicable
Environmental hazards:	No
Special precautions when transporting the substance:	Not applicable

### Additional Information:

Not applicable

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## 15. Regulatory Information

### HSNO Approval Number

HSR000741.

See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions.

### Tolerable Exposure Limit or Environmental Exposure Limit

TEL: None set  
 EEL: None set

### Relevant Regulatory Requirements

Qualifications: Not required  
 Certified Handler: Not required  
 Tracking: Not required  
 Record Keeping: Not required  
 Restricted to Workplace: Not applicable  
 Controlled substance licence: Not required

### ACVM Registration

P003493

See [www.foodsafety.govt.nz/acvm](http://www.foodsafety.govt.nz/acvm) for registration conditions.

### International Agreements related to the substance such as Montreal Protocol, the Stockholm Convention or Rotterdam Convention

not applicable

## 16. Other Information

### Date of preparation of the SDS

22 September 2023

### Key or legend to abbreviations and acronyms used

ACGIH	The American Conference of Governmental Industrial Hygienists
ACVM	Agricultural Compounds and Veterinary Medicines
ADN	International Carriage of Dangerous Goods by Inland Waterways (EU)
ADR/RID	Dangerous Goods for Road / Rail
DG	Dangerous Goods
EC50	Median effective concentration
EEL	Environmental Exposure Limit
EHSM	Environmental Health and Safety Management
EPA	Environmental Protection Authority
EU	European Union
GHS	Globally Harmonised System
ICAO	International Civil Aviation Organisation
IATA	International Air Transport Association
IERG	International Emergency Response Guide
IMDG	International Maritime Dangerous Goods
LD50	Lethal concentration to 50% of the test population
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OEL	Operator Exposure Limits
PBT or vPvP	Persistent / Bioaccumulative / Toxic or very Persistent / very Bioaccumulative
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TDG	Transportation of Dangerous Goods

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TEL	Tolerable Exposure Limit
TLVs	Threshold Limit Values
UN GHS	United Nations Globally Harmonised System
WES	Workplace Exposure Standards
49CFR	Code of Federal Regulations Title 49 for Transportation

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. 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.