

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 1/8
(30275589/SDS_CPA_CA/EN)

1. Identification

Product identifier used on the label

Kumulus DF

Recommended use of the chemical and restriction on use

Recommended use*: fungicide

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Chemical family: crop protection product, fungicide, water dispersible granules
PCP # 18836
Synonyms: Sulphur 80%

2. Hazards Identification

According to Controlled Products Regulations (CPR) (SOR/88-66)

Emergency overview

KEEP OUT OF REACH OF CHILDREN.
Avoid inhalation of dusts/mists/vapours.
Avoid contact with the skin, eyes and clothing.

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 2/8
(30275589/SDS_CPA_CA/EN)

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
7704-34-9	75.0 - 100.0%	sulfur

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

If on skin:

Wash thoroughly with soap and water.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:

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

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, foam, water spray

Unsuitable extinguishing media for safety reasons:
carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 3/8
(30275589/SDS_CPA_CA/EN)

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Avoid raising dust. Sweep/shovel up. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

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.

Protection against fire and explosion:

Avoid dust formation. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

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.

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.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No occupational exposure limits known.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 4/8
(30275589/SDS_CPA_CA/EN)

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Wash soiled clothing immediately.

9. Physical and Chemical Properties

Form:	solid
Odour:	faint specific odour, sulfur-like
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	grey brown to brown
pH value:	approx. 7 - 9 (pH Meter) (1 %(m), 20 °C)
Melting point:	approx. 112 - 116 °C
Flash point:	not applicable
Flammability:	not flammable
Density:	approx. 1.88 g/cm ³ (20 °C)
Bulk density:	870 - 953 kg/m ³
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Self-ignition temperature:	246 °C (Directive 92/69/EEC, A.16)
Thermal decomposition:	190 °C carbon monoxide, carbon dioxide, Sulphur dioxide, Hydrocarbons Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.
Solubility in water:	dispersible
Evaporation rate:	not applicable

10. Stability and Reactivity

Reactivity

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

Oxidizing properties:
not fire-propagating

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 5/8
(30275589/SDS_CPA_CA/EN)

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

Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Incompatible materials

strong bases, strong acids, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

190 °C

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, Sulphur dioxide, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: No known acute effects.

Oral

Type of value: LD50

Species: rat (male/female)

Value: > 2,200 mg/kg (OECD Guideline 401)

No mortality was observed.

Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 5.4 mg/l (OECD Guideline 403)

Exposure time: 4 h

Dermal

Type of value: LD50

Species: rat (male/female)

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 6/8
(30275589/SDS_CPA_CA/EN)

Value: > 2,000 mg/kg (OECD Guideline 402)
No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

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

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

Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. Not irritating to the skin.

Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Guinea pig maximization test

Species: guinea pig

Result: Skin sensitizing effects were not observed in animal studies.

Method: OECD Guideline 406

Chronic Toxicity/Effects

Repeated dose toxicity

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.

Genetic toxicity

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.

Teratogenicity

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.

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 7/8
(30275589/SDS_CPA_CA/EN)

Other Information

Misuse can be harmful to health.

Symptoms of Exposure

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

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic invertebrates. There is a high probability that the product is not acutely harmful to aquatic plants. There is a high probability that the product is not acutely harmful to fish.

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 bibrainus (OECD Guideline 201)

Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

static

bacterium/EC50 (18 h): > 2,000 mg/l

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

Container disposal:

Contaminated packaging should be emptied as far as possible and disposed of in accordance with official regulations after being thoroughly cleaned.

14. Transport Information

Land transport

TDG

Safety Data Sheet

Kumulus DF

Revision date : 2017/06/20
Version: 5.1

Page: 8/8
(30275589/SDS_CPA_CA/EN)

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection DSL, CA released / exempt

Chemical DSL, CA released / listed

According to Controlled Products Regulations (CPR) (SOR/88-66)

WHMIS does not apply to this product.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2017/06/20

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET