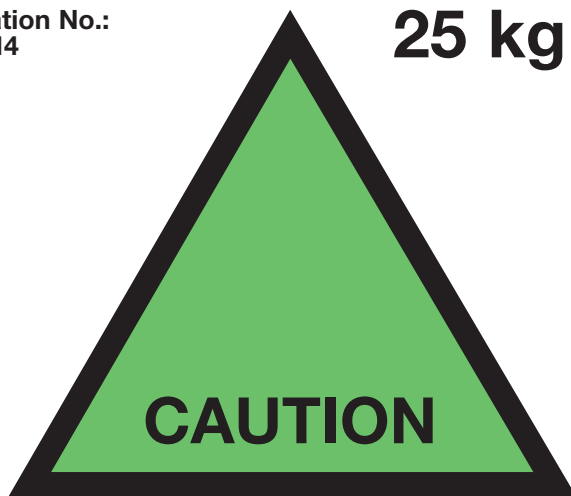


# BASF

# Kumulus® DF

Registration No.:  
96-B-3-14

25 kg net



**Harmful if swallowed**

Composition	mass/mass
sulphur .....	80 %
inert ingredients .....	20 %

**An Efficient Fungicide for the Control of Powdery Mildew and other Fungi. Also controls certain Mite Species.**

Manufactured by: BASF Aktiengesellschaft

Registered by: Pivotal Agro-Service (Pvt) Ltd.  
P.O. Box UA 414, Union Ave, Harare, Telephone 31 01 62-4,  
Telefax 33 11 68, e-mail: info@basf.co.zw

® = Registered trademark of BASF

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**TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE****PRECAUTIONS**

1. Handle with care; avoid splashing/contact with skin.
2. KEEP OUT OF REACH OF CHILDREN.
3. KEEP APART FROM FOOD AND FOODSTUFFS.
4. Store in original container and KEEP UNDER "LOCK AND KEY".
5. Do not eat, drink or smoke, while applying this fungicide.
6. Only prepare as much spray solution as necessary for immediate use.
7. Empty container thoroughly into the spray tank and dispose of safely.
8. Destroy empty container and DO NOT use for any other purpose.
9. DO NOT CONTAMINATE PONDS, WATERWAYS, DRINKING POOLS OR DITCHES WITH THE CHEMICAL.

**SYMPTOMS OF POISONING**

Ingestion of large amounts may lead to the following:

Severe mucous membrane and gastrointestinal irritation with nausea, vomiting and diarrhoea. Central nervous system depression with respiratory depression, headache, dizziness, paleness, rapid, feeble pulse, cyanosis, low blood pressure, loss of consciousness, tremors, convulsions, coma, death from respiratory paralysis.

**FIRST AID**

1. If swallowed, call medical help and show this label. Milk can be given while waiting for medical help.
2. Eye contamination: wash with copious amounts of water.
3. Skin contamination: wash with soap and water.
4. If inhaled, keep patient calm, remove to fresh air.

**NOTE TO PHYSICIAN**

If swallowed, give milk, induce emesis (unless tissue erosion evident) or perform careful gastric lavage (avoid perforation). Administer gastric antacids and demulcents. Administer artificial respiration and oxygen. If excessive vomiting or diarrhoea occurs, maintain fluid and electrolyte balance.

**WARNINGS**

1. DO NOT apply to cucumbers or sweet melons.
2. DO NOT spray Kumulus DF in very hot weather or should spraying be essential at such times, endeavour to spray during the cooler parts of the day.
3. DO NOT apply Kumulus DF four weeks before or after application of an oil or oil-based spray.

**WARRANTY**

Careful tests have proved that the product is suitable for the recommended purposes when used in accordance with our instructions. However, since storage and use are beyond our control and we are unable to foresee all circumstances arising therefrom, we do not accept any liability for damage which may result from the storage and use of the product. We are liable for the consistent quality of the product, but the risk of its storage and use is not borne by us.

**DIRECTIONS FOR USE**

<b>CROP</b>	<b>DISEASE/PEST</b>	<b>RATE/100 L WATER</b>	<b>APPLICATION</b>
APPLES	Powdery mildew	300 g	Apply a good cover spray during the critical October/November bud movement period at weekly intervals. Six applications may be required. DO NOT apply to sulphur-shy varieties such as Golden Delicious as russetting may occur.
CITRUS	Concentric ring blotch	150-200 g	Spray as a light cover spray ensuring complete and uniform wetting of all leaves and fruits. Make the first application as soon after petal fall as possible and repeat 2-3 months later. Sprays should in any case be timed before disease symptoms appear.
	Grey mites and Brevipalpus mites	150-200 g	Spray as a light cover spray ensuring complete and uniform wetting of all leaves and fruits. Spray only after scouting indicates the presence of mites on the trees.
CUCURBITS (NOT Cucumbers or sweet melons)	Powdery mildew	300 g	For use on pumpkins and squash. Start spraying at first sign of disease and continue, where necessary at 7-10 day intervals.
GROUND-NUTS	Cercospora Leaf spot	200 g	Start spraying at the first sign of disease and repeat after each heavy rain or at 14 day intervals.
PEACHES NECTARINES APRICOTS	Powdery mildew	200-300 g	Apply a good cover spray starting at 75 % petal-fall stage and continue with 2-3 further precautionary sprays at 14-21 day intervals. Additional sprays may be necessary in orchards where severe mildew attacks can be expected.
PEAS	Powdery mildew	150-200 g	Start spraying at the first sign of disease and continue at 14 day intervals. With overhead irrigated crops, apply as soon as practical after irrigation.
TOMATOES	Powdery mildew	200 g	Start spraying at the first sign of disease and repeat at 7 day intervals. This spraying programme will also control russet mite.
VINES	Powdery mildew	200 g	Kumulus DF in conjunction with Polyram DF will provide a spray programme for season-long control of disease. Kumulus DF will control powdery mildew ( <i>Uncinula necator</i> ). Spray to run off. First spray when the shoots are 10-20 cm long, and the second when shoots are 30-35 cm long. These first two applications are important and are applied irrespective of weather conditions. Continue spraying at 14 day intervals or after heavy rain. Stop spraying 4-6 weeks before harvest as the spray may tarnish the berries.

**COMPATIBILITY**

Kumulus DF is compatible with most commonly used insecticides and fungicides and, in particular, is fully compatible with Polyram DF.

DO NOT mix with mineral oils, oil based sprays, such as DNOC Peach and Winter oils.

# Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No.1907/2006

Date / Revised: 12.11.2007

Product: **KUMULUS WG**

Version: 3.0

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(30347184/SDS\_CPA\_EU/EN)

Date of print 05.02.2010

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## 1. Substance/preparation and company identification

### **KUMULUS WG**

Use: crop protection product, fungicide

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Crop Protection

Telephone: +49 621 60-27777

Telefax number: +49 621 60-27125

E-mail address: Produktinformation-Pflanzenschutz@basf.com

Emergency information:

International emergency number:

Telephone: +49 180 2273-112

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## 2. Hazard identification

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## 3. Composition/information on ingredients

Chemical nature

crop protection product, fungicide, water dispersible granules

### Hazardous ingredients

| sulfur

Content (W/W): 80 %

| CAS Number: 7704-34-9

| EC-Number: 231-722-6

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

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## 4. First-aid measures

General advice:

Avoid contact with the skin, eyes and clothing. Remove contaminated clothing. If difficulties occur: Obtain medical attention. Show container, label and/or safety data sheet to physician.

If inhaled:

Keep patient calm, remove to fresh air. Seek medical attention if necessary.

On skin contact:

After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.

On contact with eyes:

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

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician:

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

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## 5. Fire-fighting measures

Suitable extinguishing media:

water spray, foam, dry extinguishing media, carbon dioxide

Specific hazards:

sulfur oxides

Special protective equipment:

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

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**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:**

Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Remove contaminated clothes, undergarments and shoes immediately.

**Environmental precautions:**

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

**Methods for cleaning up or taking up:**

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Cleaning operations should be carried out only while wearing breathing apparatus. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

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## 7. Handling and storage

Handling

No special measures necessary if stored and handled correctly.

**Protection against fire and explosion:**

Avoid dust formation. Avoid deposition of dust. Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges. Dust can form an explosive mixture with air.

Storage

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

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 and personal protection

### Personal protective equipment

#### Respiratory protection:

Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2) Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection if ventilation is inadequate.

#### 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. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Keep away from food, drink and animal feeding stuffs. Remove contaminated clothing. No eating, drinking, smoking or tobacco use at the place of work. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift.

## 9. Physical and chemical properties

Form: low dusting fine granules  
Colour: grey-brown  
Odour: faint specific odour

#### Flash point:

not applicable

Flammability: not highly flammable

(Directive 92/69/EEC, A.10)

Minimum ignition energy: 0 - < 10 mJ

Fire promoting properties: not fire-propagating

#### Vapour pressure:

No data available.

Bulk density: 800 - 1,000 kg/m<sup>3</sup>

Solubility in water: dispersible

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## 10. Stability and reactivity

Thermal decomposition: 190 °C (VDI 2263, sheet 1, 1.4.1)  
No decomposition if stored and handled as prescribed/indicated.

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

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

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## 11. Toxicological information

### Acute toxicity

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

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

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

### Irritation

Primary skin irritation rabbit: non-irritant

Primary irritations of the mucous membrane rabbit: non-irritant

### Sensitization

guinea pig: Skin sensitizing effects were not observed in animal studies.

### Other relevant toxicity information

Misuse can be harmful to health.

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## 12. Ecological information

### Ecotoxicity

Toxicity to fish:  
LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss*

Aquatic invertebrates:  
EC50 (48 h) > 100 mg/l, *Daphnia magna*

Aquatic plants:



EC50 (72 h) 290 mg/l, *Pseudokirchneriella subcapitata*

### **Additional information**

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## **13. Disposal considerations**

Must be dumped or incinerated in accordance with local regulations.

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## **14. Transport information**

### **Land transport**

ADR

Not classified as a dangerous good under transport regulations

RID

Not classified as a dangerous good under transport regulations

### **Inland waterway transport**

ADNR

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

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## **15. Regulatory information**

### **Regulations of the European union (Labelling) / National legislation/Regulations**

EEC Directives:

S-phrase(s)

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S2	Keep out of the reach of children.
S13	Keep away from food, drink and animal feeding stuffs.
S20/21	When using do not eat, drink or smoke.

The product does not require a hazard warning label in accordance with EC Directives.

### **Other regulations**

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)

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## **16. Other information**

Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 3:

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

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 product's 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.