**Use:** A fungicide for the control of powdery mildew in apples, gooseberries, grapevines, hops, strawberries and sugar beet and for the control of scab in apples and gall mite (big bud) in blackcurrants. Also for use as a sulphur foliar feed in wheat, barley and winter oilseed rape.

**Formulation:** A water dispersible granule containing 80% sulphur.

**Pack Size:** 20 kg

**LERAP:** Not required.

**Recommended Crops:** See Section No:

- Apples: 3.4
- Gooseberries: 3.6
- Grapevines: 3.3
- Hops: 3.2
- Strawberries: 3.7
- Sugar beet: 3.1
- Blackcurrants: 3.5
- Wheat and Barley: 3.9
- Winter oilseed rape: 3.8

**Recommended Rates:** Various, depending on crop. See recommendations for details.

**Water Volume:** Various, depending on crop. See recommendations for details.

**Spray Quality:** MEDIUM

**Latest Time of Application:**

- Gooseberries: Up to and including fruit swell.
- Hops: Up to burr stage
- Sugar beet: Before end of September in year of harvest.
- All other recommended crops: No restriction.

**Major changes since last printing:** None

This product label is compliant with the CPA Voluntary Initiative Guidance
**Maximum Number of Applications:**
Sugar beet: 2 per year.
Blackcurrants, gooseberries: 3 per year.
All other recommended crops: No restriction.

**Processed Crops:** **DO NOT** apply to fruit for processing, or near to harvest on grapes intended for wine.

**Aerial Application:** Wheat, barley and oilseed rape.

**Compatibility:** For details of compatibilities contact your distributor, local BASF representative, the BASF Technical Services Hotline: 0845 602 2553 or visit our website on: www.agriCentre.basf.co.uk

**DIRECTIONS FOR USE**
IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

Kumulus DF is a fungicide for the control of powdery mildew in apples, gooseberries, grapevines, hops, strawberries and sugar beet and for the control of scab in apples and gall mite (big bud) in blackcurrants. Also for use as a sulphur foliar feed in wheat, barley and winter oilseed rape.

1. **RESTRICTIONS/WARNINGS**
   Processed crops: **DO NOT** apply Kumulus DF to fruit for processing, or near to harvest on grapes intended for wine.
   **DO NOT** apply Kumulus DF to the following varieties of gooseberries: Careless; Early Sulphur; Golden Drop; Leveller; Lord Derby; Roaring Lion; Yellow Rough.
   **DO NOT** apply Kumulus DF to the following varieties of apples: Belle de Boskoop; Lord Derby; Newton Wonder (some districts); Stirling Castle; Lane’s Prince Albert; Cox’s Orange Pippin; Beauty of Bath; Rival.
   Avoid spray drift onto neighbouring crops.
   **DO NOT** apply Kumulus DF if rain or frost is expected, nor if the crop is wet. Wash equipment thoroughly after use.

2. **DISEASE CONTROL**
   Kumulus DF is a fungicide for the control of powdery mildew in apples, gooseberries, grapevines, hops, strawberries and sugar beet and for the control of scab in apples and gall mite (big bud) in blackcurrants. Also for use as a sulphur foliar feed in wheat, barley and winter oilseed rape.

3. **CROPS**

3.1 **Sugar beet: Powdery mildew**

   **Time of Application**
   Apply Kumulus DF when the disease begins to build up in the crop, usually from mid August to early September. A second application may prove to be necessary after 2-3 weeks.

   **Rate of Application**
   Apply 10 kg Kumulus DF in a minimum of 450 litres of water per hectare.

3.2 **Hops: Powdery mildew**

   **Time of Application**
   Apply Kumulus DF at 10 day intervals from May up to the burr stage.
Rate of Application
Apply 400-600 g Kumulus DF per 100 litres of water high volume or 8-11 kg Kumulus DF in 350-550 litres of water per hectare.

3.3 Grapevine: Powdery mildew

Time of Application
Apply Kumulus DF as soon as the disease appears and repeat at 10-14 day intervals.

Rate of Application
Apply 250 g Kumulus DF per 100 litres of water high volume.

3.4 Apple: Scab and powdery mildew

Time of Application
Apply Kumulus DF at 10-14 day intervals, (a) from bud burst to green cluster for scab control and (b) post blossom for scab and mildew control.

Rate of Application
Apply 600 g Kumulus DF per 100 litres of water high volume or 11 kg in 550-750 litres of water per hectare at the earlier timing, followed by 400 g Kumulus DF per 100 litres of water high volume or 11 kg in 550-750 litres of water per hectare post blossom.

Variatel Tolerances
DO NOT apply Kumulus DF to the following varieties: Belle de Boskoop; Lord Derby; Newton Wonder (some districts); Stirling Castle; Lane’s Prince Albert; Cox’s Orange Pippin; Beauty of Bath; Rival.

3.5 Blackcurrant: Gall mite (big bud)

Time of Application
Apply Kumulus DF at first open blossom and repeat at 14 day intervals to give a total of three applications.

Rate of Application
Apply 200 g Kumulus DF per 100 litres of water high volume. The addition of an authorised non-ionic wetting agent at the recommended rate, is recommended for good spray retention. High volume of 2200 litres per hectare is also recommended to give adequate spray cover.

3.6 Gooseberry: American gooseberry mildew (powdery mildew)

Time of Application
Apply Kumulus DF at early flower, fruit set and fruit swell, thoroughly wetting the bushes.

Rate of Application
Apply 250 g Kumulus DF per 100 litres of water high volume.

Variatel Tolerances
DO NOT apply Kumulus DF to the following varieties: Careless; Early Sulphur; Golden Drop; Leveller; Lord Derby; Roaring Lion; Yellow Rough.

3.7 Strawberry: Powdery mildew

Time of Application
Apply Kumulus DF as soon as the disease appears and repeat at 10-14 day intervals.

Rate of Application
Apply 200 g Kumulus DF per 100 litres of water high volume.
3.8 Winter oilseed rape: Sulphur foliar feed

**Time of Application**
In areas of known sulphur deficiency or where a response has been recorded previously, apply Kumulus DF in March, as the crop begins to re-grow after the winter dormancy period.

**Rate of Application**
Apply 10 kg Kumulus DF in 220-450 litres of water per hectare.

3.9 Wheat and barley: Sulphur foliar feed

**Time of Application**
In areas of known sulphur deficiency or where a response has been recorded previously, apply Kumulus DF in the spring from leaf sheath lengthening to first node detectable.

**Rate of Application**
Apply 10 kg Kumulus DF in 220-450 litres of water per hectare.

4. MIXING AND SPRAYING

Apply as a MEDIUM spray, as defined by BCPC.
For water volumes, see Section 3, above.

Remove the top filter. Fill the spray tank to the required volume with clean water and start the agitation. Then slowly add the required amount of Kumulus DF. Replace the filter, leave to disperse and continue agitation until spraying is completed.

When tank mixes are to be used, each product should be pre-diluted with water and added separately to the spray tank.

Kumulus DF may be applied from the air to wheat, barley and oilseed rape at the recommended rate in 25-60 litres of water per hectare. Aerial applications should not be made in tank mix with any other products.

5. CONTAINER AND STORAGE

Kumulus DF is supplied in 20 kg lined paper sacks and should be kept dry and cool in a suitable pesticide store.
6. **SAFETY PRECAUTIONS**

**Operator protection**
WASH HANDS before meals and after work.

**Environmental protection**
DO **NOT** contaminate surface waters or ditches with chemical or used container.

**Storage and disposal**
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.  
EMPTY CONTAINER COMPLETELY and dispose of safely.  
Keep dry and cool in a suitable pesticide store.

7. **DPD REGULATIONS (CHIP 3)**

<table>
<thead>
<tr>
<th><strong>Kumulus® DF</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A water dispersible granule containing 80% sulphur.</td>
</tr>
</tbody>
</table>

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

This product is approved under the Control of Pesticides Regulations 1986.
8. IMPORTANT INFORMATION

<table>
<thead>
<tr>
<th>Crops</th>
<th>Maximum Concentration or Dose</th>
<th>Maximum Number of Treatments</th>
<th>Latest Time of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>600 g product in 100 litres water (HV) or 11 kg product per hectare (LV)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Blackcurrants</td>
<td>200 g product in 100 litres water</td>
<td>3 per year</td>
<td>–</td>
</tr>
<tr>
<td>Grapevines</td>
<td>250 g product in 100 litres water</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Gooseberries</td>
<td>250 g product in 100 litres water</td>
<td>3 per year</td>
<td>Up to and including fruit swell</td>
</tr>
<tr>
<td>Hops</td>
<td>600 g product in 100 litres water (HV) or 11 kg product per hectare (LV)</td>
<td>–</td>
<td>Up to burr stage</td>
</tr>
<tr>
<td>Strawberries</td>
<td>200 g product in 100 litres water</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Sugar beet</td>
<td>10 kg product per hectare</td>
<td>2 per year</td>
<td>Before end of September in year of harvest</td>
</tr>
</tbody>
</table>

A minimum interval of 10 days must be observed between treatments to hops, grapevines and strawberries.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

(MAFF No. 04707)