



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 14, 2018

Ms. Ana Rodriguez-Koster  
Agent  
Quimetal Industrial S.A.  
c/o Lewis & Harrison, LLC  
2461 South Clark Street, Suite 710  
Arlington, VA 22202

Subject: Notification per PRN 98-10 – Add graphic  
Product Name: Defend DF  
EPA Registration Number: 62562-8  
Application Date: November 16, 2018  
Decision Number: 546448

Dear Ms. Rodriguez-Koster:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

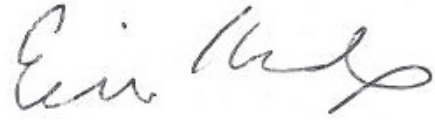
The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact please contact BeWanda Alexander at (703)347-0313 or by email at [alexander.bewanda@epa.gov](mailto:alexander.bewanda@epa.gov).

Page 2 of 2  
EPA Reg. No. 62562-8  
Decision No. 546448

Sincerely,

A handwritten signature in black ink, appearing to read "Erik Kraft". The signature is written in a cursive style with a large, sweeping initial "E".

Erik Kraft, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

**NOTIFICATION**

62562-8

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

12/14/2018

**DEFEND DF**

MICRONIZED WETTABLE SULPHUR  
WDG (WATER DISPERSIBLE GRANULE)

MASTER LABEL

Sub-Label A: Agricultural/Commercial Use  
Sub-Label B: Residential Use (Home and Garden Use)

ACTIVE INGREDIENT:	BY WT.
Sulfur**	80.0 %
OTHER INGREDIENTS:	<u>20.0%</u>
TOTAL:	100.0 %

\*\* CAS No. 7704-34-9

KEEP OUT OF REACH OF CHILDREN

**CAUTION**

EPA Reg. No. 62562-8

EPA Est. No. [Insert Est. No. Here]

Manufactured by: *QUIMETAL INDUSTRIAL S.A.*  
Los Yacimientos 1301 • Maipu • Santiago • Chile  
Phone: (56-2) 381 7000 • Fax (56-2) 381 7191

PRODUCT OF CHILE

Sub-Label A: Agricultural/Commercial Use

# DEFEND DF

MICRONIZED WETTABLE SULPHUR  
WDG (WATER DISPERSIBLE GRANULE)

For Organic Production



ACTIVE INGREDIENT:

Sulfur\*\*

OTHER INGREDIENTS:

TOTAL:

BY WT.

80.0 %

20.0%

100.0 %

\*\* CAS No. 7704-34-9

KEEP OUT OF REACH OF CHILDREN

## CAUTION

FIRST AID	
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	

See additional Precautionary Statements on side panel.

EPA Reg. No. 62562-8

EPA Est. No. [Insert Est. No. Here]

Manufactured by: *QUIMETAL INDUSTRIAL S.A.*  
Los Yacimientos 1301 • Maipu • Santiago • Chile  
Phone: (56-2) 381 7000 • Fax (56-2) 381 7191

PRODUCT OF CHILE

NET CONTENTS: \_\_\_\_\_

Batch Code / Lot Number: \_\_\_\_\_

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and others handlers must wear long-sleeved shirt and long pants, chemical resistant gloves made of any waterproof material, shoes plus socks, and protective eyewear.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of rinsate or equipment washwaters.

**PHYSICAL HAZARDS**

Sulfur dust suspended in air ignites easily. Keep away from heat, sparks, or flames. Do not smoke while applying this product.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours. EXCEPTION: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, waterproof gloves, shoes plus socks, and protective eyewear.

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

For non-agricultural turf and grass uses (golf courses, home lawns, and landscapes around buildings) do not enter or allow others to enter into treated area until sprays have dried.

### **STORAGE AND DISPOSAL**

**PROHIBITIONS:** Do not contaminate water, food or feed by storage or disposal of this product.

**PESTICIDE STORAGE:** Store in a cool, dry area.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Non-refillable bag. Do not reuse or refill this bag. Offer for recycling, if available. If recycling is not available, then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Sulphur may cause severe fruit and foliage injury to certain crops. Sulphur sensitive plants include D'Anjou and Comice pears, apricots, cranberries, certain varieties of cucurbits, filberts, spinach, Tung walnuts, and certain ornamentals. Apples, pears and strawberries are susceptible to foliage burn with sulphur under certain climatic conditions. Sulphur may burn foliage when temperature is high. As a result, Quimetal Industrial S. A. does not recommend application if temperatures during or within 3 days after application are expected to exceed 90° F in the area to be treated. Do not use within 2 weeks of an oil spray treatment (on citrus within 3-6 weeks). Defend DF may be applied with oil during dormant and delayed dormant applications according to specific direction. When growing crops for processing consult the processor before applying sulphur.

Measure needed amount into bucket, stir to make thin slurry. Add to tank when partially full and before other materials are added. Add wetting agents last to avoid foaming.

### **DIRECTIONS FOR DILUTION**

**DILUTE APPLICATION:** Ground application: Apply specified rate in 20-60 gallons of water per acre. Orchard application: Apply specified rates in 100-800 gallons of water per acre.

**AERIAL APPLICATION:** Apply specified rate in 5-20 gallons of water per acre. For orchard applications, do not apply in less than 10 gallons of water per acre.

**USE HIGH DOSAGE RATES WHEN DISEASE PRESSURE IS SEVERE.**

### **CROP USE DIRECTIONS**

**ALMONDS:** Brown Rot Blossom and Twig Blight, Leaf Spot, Red Spider Mites, Flat Mite, Rust, Silver Mite. Apply 10-30 lbs. per acre. Apply at bloom or early petal fall. Apply with cover sprays throughout the season. Apply with spray oil during the dormant and delayed dormant periods of bud development using 10-20 lbs. per acre.

**APPLES, PEARS:** Powdery Mildew, Scab, Blister Mites, Red Spider Mites, Silver Mite, Two-Spotted Mite. Apply 10-30 lbs. per acre. Do not apply to D'Anjou pears. Apply pre-bloom and petal fall. Apply with cover sprays throughout the season. Apply with spray oil during the dormant and delayed dormant periods of bud development using 10-20 lbs. per acre. Do not apply to sensitive varieties of pears except at these stages.

**ARTICHOKES (ALL VARIETIES):** Leaf Spot. Apply 10-20 lbs. per acre. Begin when disease first appears and repeat at 7 to 10-day intervals.

**ASPARAGUS:** Rust. Apply 10-30 lbs. per acre. Use after cutting stops. Irrigate and cultivate before applying. Repeat at 7-10 day intervals through the fern growth season.

**AVOCADOS:** Brown Mite. Apply 10-30 lbs. per acre when mites are first noticed.

**BANANAS:** Mites. Apply 10-30 lbs. per acre. Apply as needed.

**BEANS, PEAS, PEPPERS, POTATOES:** Powdery Mildew, Red Spider Mites. Apply 3 to 5 lbs. per acre. Start in early leaf stage. Repeat application every 10-14 days, with or without pesticides, immediately after a rain.

**BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, KOHLRABI:**

Powdery Mildew, Septoria Leaf Spot, Red Spider Mites. Apply 3-5 lbs. per acre. Start in early leaf stage. Repeat applications every 10-14 days, immediately after a rain.

**BLACKBERRY, BOYSENBERRY, DEWBERRY, LOGANBERRY, BLUEBERRY, GOOSEBERRY, HUCKLEBERRY, CURRANT:** Powdery Mildew. Apply 6-15 lbs. per acre. Begin when new shoots are 6 inches long and before blossoms open. Repeat at 10 day intervals or as necessary.

**CARROTS, GARLIC, ONIONS, SHALLOTS:** Petrobia Mite, Powdery Mildew. Apply 3-10 lbs. per acre when disease first appears and repeat as needed.

**CELERY:** Powdery Mildew, Red Spider Mite, Rust. Apply 4-6 lbs. per acre. Apply at early life stage and repeat every 10 to 14 days or as needed.

**CHERRIES:** Brown Rot Blossom and Twig Blight, Powdery Mildew, Leaf Spot, Silver Mites, Flat Mites, Red Spider Mites, Rust. Apply 10 to 30 lbs. per acre. Apply at bloom or early petal fall. Repeat as necessary, usually 10-14 days or after a period of wet weather.

**CITRUS:** Flat Mites, Silver Mites, Broad Mite, Bud Mite, Citrus Rust Mite, Red Spider Mite, Six-spotted Mite, Thrips, Yuma Spider Mite. Apply 8-20 lbs per acre. Apply in any spray - NOT CONTAINING OIL - or following oil by 21 days.

**CLOVER:** Mites, Powdery Mildew. Apply 2-9 lbs. per acre. Apply as needed.

**COTTON, ALFALFA, SEED ALFALFA:** Atlantic Mite, Red Spider Mites. Apply 3 to 5 lbs. per acre.

**CORN, WHEAT, BARLEY, OATS, RYE, SORGHUM:** Atlantic Mite, Banks Grass Mite, Pacific Mite, Red Spider Mite, Two-spotted Mite. Apply 8-10 lbs. per acre. Apply when mites or symptoms first appear and repeat applications as necessary.

**COWPEAS:** Rust. Apply 2-9 lbs. per acre. Begin application soon after seedling emergence. Repeat at 7 to 10-day intervals as needed throughout the season.

**CUCUMBERS:** Powdery Mildew. Apply 2-4 lbs. per acre. Apply when disease first appears and repeat as necessary. Do not apply more than 2 pounds per acre per application during periods of high temperature.

**CUCURBITS:** Powder Mildew, Bug Mites, Blister Mites, Red Spider Mites. Apply 2 to 10 lbs. per acre. Application intervals throughout the growing season 10-14 days.

**DATES:** Banks Grass Mite. Apply 20 lbs. per acre. Apply in sufficient water to provide thorough coverage of the date clusters. Begin applications as mites or mite webbing are first observed. Repeat application every 14 days or as necessary, until dates are mature and are no longer subject to mite feeding injury.

**EGGPLANT:** Powdery Mildew. Apply 4-6 lbs. per acre. Apply when first true leaves appear. Repeat at weekly intervals or as needed.

**ENDIVE, ESCAROLE, SWISS CHARD, SALSIFY:** Powdery Mildew, Red Spider Mite, Rust. Apply 4-6 lbs. per acre. Apply at early leaf stage and repeat every 10 to 14 days or as needed.



**FIGS:** Mites (including Eriophyid Mites and Fig Mite). Apply 5 lbs. per acre. Apply at a minimum of 100 gallons per acre. Begin applications in the spring and continue on a 3-4 week schedule or as needed.

**FLAX:** Powdery Mildew. Apply 2 to 9 lbs. per acre. Apply at first sign of disease. Repeat at 7 to 10-day intervals or as needed.

**FORAGE GRASSES (TIMOTHY, ORCHARD GRASS, FESCUES, SUDAN GRASS, BERMUDA GRASS, BLUEGRASS, BROMEGRASS):** Mites (including Banks Grass Mite). Apply 5 to 10 lbs. per acre. Apply at first sign of mites. Continue applications at 7-day intervals, or as needed, until mites are below economic levels. The addition of adjuvants (spreaders, surfactants, etc.) can increase the chance of crop injury and is not recommended. For aerial applications, use the specified rate at a minimum of 3 gallons of water per acre. For ground applications, use the specified rate in a minimum of 20 gallons of water per acre.

**GRAPES:** Powdery Mildew, Bud Mites, Blister Mites, Red Spider Mites, Phomopsis. Apply 2 to 10 lbs. per acre. Apply in late dormant or with cutworm spray, early shoot period and through season on a 14 day schedule or with pesticides.

**GREENS: COLLARDS, KALE, MUSTARD, BEET:** Powdery Mildew, Red Spider Mites, Rust. Apply 3 to 10 lbs. per acre. Apply at early leaf stage and repeat every 14 days or as needed.

**HOPS:** To aid in the suppression of Red Spider Mites, use 2-6 lbs. per acre by air or ground. Do not apply in less than 10 gallons of water per acre. Mix 2-6 lbs. per 100 gallons of water.

**LETTUCE (HEAD AND LEAF):** Powdery Mildew, Red Spider Mite, Rust. Apply 5-10 lbs. per acre. Apply at early leaf stage and repeat every 14 days or as needed. Thorough coverage is required.

**MANGOS:** Powdery Mildew. Apply 10-30 lbs. per acre. Begin application before bloom. Repeat at bloom, after fruit set, and 3 weeks later or as necessary.

**MELONS:** Powdery Mildew. Apply 20-25 lbs. per acre. Treat when the disease first appears and repeat as necessary. Sulphur can injure plants, especially when the temperature reaches 95°F. Do not use on sulphur sensitive varieties.

**OKRA:** Leaf Spot Mites, Powdery Mildew. Apply 3-10 lbs. per acre. Apply at early leaf stage and repeat every 14 days or as needed.

**OLIVES:** Olive Mite. Apply 10-30 lbs. per acre. Apply as needed.

**ORNAMENTALS, ROSES:** Leaf Spot, Powdery Mildew, Two-spotted Mites. Apply 3-10 lbs. per acre by ground or 3-20 lbs. per acre by air. Apply to ensure complete plant coverage. Begin when disease first appears and repeat at 5 to 10-day intervals.

**PAPAYAS:** Mites. Apply 10-30 lbs. per acre. Apply when mites first appear and repeat as necessary to maintain control. Do not apply in combination with emulsifiable pesticide formulations as foliar injury may occur. Do not apply to low vigor or moisture stressed plants. Do not apply prior to or during periods of excessively high temperatures, periods of low rainfall or within two weeks of an oil spray.

**PEACHES AND NECTARINES:** Brown Rot Blossom and Twig Blight, Powdery Mildew, Silver Mites, Red Spider Mites, Flat Mite, Leaf Spot, Rust. Apply 10-30 lbs. per acre. Apply at bloom or early petal fall. Repeat as necessary, usually 10-14 days, or after a period of wet weather.

**PEANUTS:** Powdery Mildew, Red Spider Mites, Leaf Spot, Rust, Two-spotted Mite. Apply 3 to 5 lbs. per acre. Start in early leaf stage. Repeat application as necessary, usually 10-20 days.

**PECANS:** Powdery Mildew, Red Spider Mites, Leaf Spot, Eriophyid Mites, Flat Mite, Silver Mite, Sooty Mold, Two-Spotted Mite. Apply 5 to 10 lbs. per acre. Apply throughout the season as needed. Note that some varieties of pecans are sensitive to sulfur spray under certain conditions. Do not apply unless varieties are known to be tolerant to sulfur.

**PEPPERMINT, SPEARMINT:** Powdery Mildew. Apply 4-6 lbs. per acre when mint is 5-6" tall or when disease appears. Repeat twice at 30 day intervals. Do not apply within 30 days of harvest.

**PINEAPPLE:** Mites. Apply 10 to 30 lbs. per acre. Apply as needed.

**PISTACHIOS:** Mites. Apply 10 to 20 lbs. per acre. Begin application in June – July. Make additional applications as necessary. When temperatures exceed 90°F, lower rates and more frequent applications are advised in order to avoid crop injury.

**PLUMS AND PRUNES:** Brown Rot Blossom and Twig Blight, Powdery Mildew, Silver Mites, Red Spider Mites, Flat Mite, Leaf Spot, Rust. Apply 10 to 30 lbs. per acre. Apply at bloom or early petal fall. Repeat as necessary, usually 10-14 days, or after a period of wet weather.

**POMEGRANATE:** Mites. Apply 3 to 10 lbs. per acre. Begin application in May or June. Make additional applications on a 3-4 week schedule, or as necessary. Use higher rates if past mite damage has been high. If temperatures exceed 90°F, lower rates and more frequent applications are recommended to avoid crop injury.

**QUINCE:** Brown Rot, Powdery Mildew, Scab. Apply 10 to 30 lbs. per acre. Begin application at early leaf stage and repeat as necessary. Do not use on sulfur-sensitive varieties.

**RASPBERRY (Rubis Spp.):** Powdery Mildew, (*Sphaerotheca Humuli*), Red Berry Mite. Apply 6-15 lbs. per acre. Spray each week starting at first bloom color. Continue until fruit is set; then repeat as weather requires.

**SOYBEANS:** Leaf Spot, Powdery Mildew, Rust. Apply 10 to 15 lbs. per acre. Apply at early leaf stage and repeat at 7 to 14-day intervals or as needed.

**SPINACH:** Powdery Mildew, Rust. Apply 4 to 6 lbs. per acre. For use on spinach to be processed only. Do not use on fresh spinach as sulfur has been shown to have phytotoxic effects on certain varieties of spinach. Spray on a small area first to test for phytotoxicity before making a full application. Apply when disease first appears and repeat at 7 to 10-day intervals or as needed.

**SQUASH (PUMPKINS, SUMMER AND WINTER SQUASH):** Powdery Mildew. Apply 5 - 10 lbs. per acre. Apply when disease first appears and repeat as needed. Sulfur can injure plants, especially when temperatures reach 90°F. Do not use on sulfur sensitive varieties.

**STRAWBERRIES:** Powdery Mildew, Red Spider Mites, Two-spotted Mites. Apply 5-10 lbs. per acre. Start in early leaf stages. Repeat application with or without pesticides. For powdery Mildew, begin at first signs of disease and repeat as necessary.

**SUGAR BEETS:** Red Spider Mites (Spp.), Powdery Mildew. Apply 10-20 lbs. per acre. Apply at first indication of problem with or without other pesticides. Repeat as necessary.

**SUGARCANE:** Mites. Apply 8-15 lbs. per acre. Apply when mite pressure is imminent and repeat application as necessary.

**SWEET POTATOES:** Leaf Spot Mites, Powdery Mildew, Red Spider Mites. Apply 5 lbs. per acre. Apply at early leaf stage and repeat every 14 days or as needed.

**TABLE BEETS:** Powdery Mildew, Red Spider Mites. Apply 3 - 5 lbs. per acre. Apply at first indication of problem or without other pesticides. Repeat as necessary.

**TOMATOES:** Russet Mites, Powdery Mildew, Two-Spotted Mites. Apply 10-20 lbs. per acre. Thorough coverage is required.

**TURNIPS, PARSNIPS, HORSERADISH, RADISHES, RUTABAGAS:** Powdery Mildew, Red Spider Mites, Rust. Apply 3 - 10 lbs. per acre. Apply at early leaf stage and repeat every 14 days or as needed.

**COMMERCIAL TURF AND GRASS (INCLUDING GOLF COURSES, SOD FARMS, AND GRASS GROWN FOR SEED):** Fusarium Patch (suppression), Powdery Mildew, Rust, Take-all (suppression). Apply 3 - 10 lbs. per acre. Application must begin at the very first stage of disease or as a preventative treatment when conditions favor disease. Repeat applications as needed. Tank mixing with systemic fungicides will improve control and help in a resistance management program with these fungicides.

**WALNUTS, MACADAMIA NUTS:** European Red Mites, Pacific Mites, Almond Mites, Two-spotted Mites, Red Spider Mites, Broad Mite. Apply 10-20 lbs. per acre. Apply with mite sprays during season to increase the effectiveness of miticides. Certain varieties of walnuts are sensitive to sulphur sprays under certain conditions. Do not apply unless the varieties of walnuts are sensitive to sulphur sprays under certain conditions. Do not apply unless the varieties are known to be tolerated to sulphur in your area.

## DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS

### GENERAL INSTRUCTIONS:

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, or drip (mini-micro sprinklers, strip tubing, trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

### PRECAUTIONS:

- Corrosion of aluminum and carbon/galvanized steel irrigation sprinkler system may be experienced with the use of sulfur fungicides. If the user elects to apply this product through such systems, it is essential that all application equipment containing this product be thoroughly flushed with clean water after each day's use. Continue to operate the system with clean water until all product has cleared the last sprinkler head.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have any questions about calibration, you should contact the State Extension Service Specialist in your area, the equipment manufacturer, and/or other experts.
- A person knowledgeable of the chemigation system and responsible for its operation (or under the supervision of the responsible person) must shut down the system and make necessary adjustments if a need arises.
- Do not connect chemigation system to any public water system. Public water system is a system for the provision of piped water for human consumption if such system has at least 15 service connections or regularly services an average of at least 25 individuals daily at least 60 days out of the year.
- This product may be applied in conjunction with chemically-neutral liquid fertilizers.

### SYSTEM REQUIREMENTS:

- Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally-closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- System must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### APPLICATION INSTRUCTIONS:

- Observe the requirements in the Systems Requirements section.
- Apply product only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off.

- Maintain a gentle continuous agitation in the mix tank during mixing and application to ensure a uniform suspension.
- Greater accuracy in calibration and distribution will be achieved by injecting a large volume of a more dilute suspension per unit time.
- Application of more than recommended quantities or irrigation water per acre may result in decreased product performance.
- Do not apply when wind speed favor drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when liens containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the will/pivot/injection unit to prevent spray being applied to this area.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.

#### SPRAY PREPARATION:

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water. Prepare a suspension of the product in a mix tank. Fill the tank with  $\frac{1}{2}$  or  $\frac{3}{4}$  of the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the require amount of product and then the remaining volume of water.

#### Sprinkler-Irrigation Notes:

Observe all Systems Requirements and Application Instructions listed above.

Set sprinkler system to deliver 0.1 to 1.25 in. of water per acre. Volume of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of the product into the irrigation water line so as to deliver the desired rate per acre. The product's suspension must be injected with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. When treatment with the product has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop. Do not apply when wind speed favors drift beyond the area intended for treatment. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result. Check local restrictions and requirements regarding sprinkler irrigation applications as they may vary from state to state.

**NOTE:** Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on this label when used in accordance with directions under normal conditions of use; but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions not reasonably foreseeable to seller; to the extent consistent with applicable law, the buyer assumes the risk of any such use.

Sub-Label B: Residential Use (Home and Garden Use)

**DEFEND DF**  
MICRONIZED WETTABLE SULPHUR  
WDG (WATER DISPERSIBLE GRANULE)

For Home and Garden Use

For Organic Gardening



ACTIVE INGREDIENT:  
Sulfur\*\*  
OTHER INGREDIENTS:  
TOTAL:

BY WT.  
80.0 %  
20.0%  
100.0 %

\*\* CAS No. 7704-34-9

KEEP OUT OF REACH OF CHILDREN

**CAUTION**

FIRST AID	
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	

See additional Precautionary Statements on side panel.

EPA Reg. No. 62562-8

EPA Est. No. [Insert Est. No. Here]

Manufactured by: *QUIMETAL INDUSTRIAL S.A.*  
Los Yacimientos 1301 • Maipu • Santiago • Chile  
Phone: (56-2) 381 7000 • Fax (56-2) 381 7191

PRODUCT OF CHILE

NET CONTENTS: \_\_\_\_\_  
Batch Code / Lot Number: \_\_\_\_\_

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of rinsate or equipment washwaters.

**PHYSICAL HAZARDS**

Sulfur dust suspended in air ignites easily. Keep away from heat, sparks, or flames. Do not smoke while applying this product.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

To control mites and diseases listed on this label apply at a rate of 2 to 5 tablespoons per gallon of water. Make applications when the disease or mites first appear and continue at 7 to 14-day intervals until danger from disease or mites has passed. During periods of humidity or rain, it may be necessary to make applications as often as every 2 to 3 days. Apply to plant foliage (both sides of leaves), stems, and flowers. Do not apply during full sun, or during times when temperatures exceed 95°F. Do not reuse measuring utensils for cooking or household purposes. Do not enter or allow others to enter until sprays have dried.

DEFEND DF applications will provide sulphur for the plant's nutrient requirements and should be considered in the total plant nutrient applications. DEFEND DF can be used as a micronutrient supplement by either foliar or soil application. DEFEND DF is recommended on the following crops: alfalfa\*, almonds, avocados, apples, barley\*, all beans, broccoli, cabbage, cauliflower, carrots, celery, citrus, corn\*, grapes, lettuce, melons, nectarines, pears, peaches, soybeans\*, sugar beets, sweet corn\*, strawberries, tomatoes, turnips, walnuts\*, watermelons, wheat\* and most other crops.

DEFEND DF is not for use on crops grown for resale.

**DEFEND DF MAY BE USED ON THE FOLLOWING HOME AND GARDEN PLANTS  
TO CONTROL THE LISTED DISEASES:**

**ALMONDS:** Brown Rot Blossom and Twig Blight, Leaf Spot, Red Spider Mites, Flat Mite, Rust, Silver Mite.

**APPLES, PEARS:** Powdery Mildew, Scab, Blister Mites, Red Spider Mites, Silver Mite, Two-Spotted Mite. Do not apply to D'Anjou pears. Do not apply to sensitive varieties of pears.

**ARTICHOKES (ALL VARIETIES):** Leaf Spot.

**ASPARAGUS:** Rust.



**AVOCADOS:** Brown Mite.

**BANANAS:** Mites.

**BEANS, PEAS, PEPPERS, POTATOES:** Powdery Mildew, Red Spider Mites.

**BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CAULIFLOWER, KOHLRABI:**  
Powdery Mildew, Septoria Leaf Spot, Red Spider Mites.

**BLACKBERRY, BOYSENBERRY, DEWBERRY, LOGANBERRY, BLUEBERRY, GOOSEBERRY, HUCKLEBERRY, CURRANT:** Powdery Mildew.

**CARROTS, GARLIC, ONIONS, SHALLOTS:** Petrobia Mite, Powdery Mildew.

**CELERY:** Powdery Mildew, Red Spider Mite, Rust.

**CHERRIES:** Brown Rot Blossom and Twig Blight, Powdery Mildew, Leaf Spot, Silver Mites, Flat Mites, Red Spider Mites, Rust.

**CITRUS:** Flat Mites, Silver Mites, Broad Mite, Bud Mite, Citrus Rust Mite, Red Spider Mite, Six-spotted Mite, Thrips, Yuma Spider Mite.

**CLOVER\*:** Mites, Powdery Mildew.

**COTTON\*, ALFALFA\*, SEED ALFALFA\*:** Atlantic Mite, Red Spider Mites.

**CORN\*, WHEAT\*, BARLEY\*, OATS\*, RYE\*, SORGHUM\*:** Atlantic Mite, Banks Grass Mite, Pacific Mite, Red Spider Mite, Two-spotted Mite.

**COWPEAS\*:** Rust.

**CUCUMBERS:** Powdery Mildew.

**CUCURBITS:** Powder Mildew, Bug Mites, Blister Mites, Red Spider Mites.

**DATES\*:** Banks Grass Mite.

**EGGPLANT:** Powdery Mildew.

**ENDIVE, ESCAROLE, SWISS CHARD, SALSIFY:** Powdery Mildew, Red Spider Mite, Rust.

**FIGS:** Mites (including Eriphyid Mites and Fig Mite).

**FLAX\*:** Powdery Mildew.

**FORAGE GRASSES\* (TIMOTHY\*, ORCHARD GRASS\*, FESCUES\*, SUDAN GRASS\*, BERMUDA GRASS\*, BLUEGRASS\*, BROMEGRASS\*):** Mites (including Banks Grass Mite).

**GRAPES:** Powdery Mildew, Bud Mites, Blister Mites, Red Spider Mites, Phomopsis.

**GREENS: COLLARDS, KALE, MUSTARD, BEET:** Powdery Mildew, Red Spider Mites, Rust.



**HOPS\*:** Red Spider Mites.

**LETTUCE (HEAD AND LEAF):** Powdery Mildew, Red Spider Mite, Rust.

**MANGOS:** Powdery Mildew.

**MELONS:** Powdery Mildew. Sulphur can injure plants, especially when the temperature reaches 95°F. Do not use on sulphur sensitive varieties.

**OKRA:** Leaf Spot Mites, Powdery Mildew.

**OLIVES:** Olive Mite.

**ORNAMENTALS, ROSES:** Leaf Spot, Powdery Mildew, Two-spotted Mites.

**PAPAYAS:** Mites. Do not apply in combination with emulsifiable pesticide formulations as foliar injury may occur. Do not apply to low vigor or moisture stressed plants. Do not apply prior to or during periods of excessively high temperatures, or periods of low rainfall.

**PEACHES AND NECTARINES:** Brown Rot Blossom and Twig Blight, Powdery Mildew, Silver Mites, Red Spider Mites, Flat Mite, Leaf Spot, Rust.

**PEANUTS:** Powdery Mildew, Red Spider Mites, Leaf Spot, Rust, Two-spotted Mite.

**PECANS\*:** Powdery Mildew, Red Spider Mites, Leaf Spot, Eriophyid Mites, Flat Mite, Silver Mite, Sooty Mold, Two-Spotted Mite. Note that some varieties of pecans are sensitive to sulfur spray under certain conditions. Do not apply unless varieties are known to be tolerant to sulfur.

**PEPPERMINT, SPEARMINT:** Powdery Mildew.

**PINEAPPLE\*:** Mites.

**PISTACHIOS:** Mites. When temperatures exceed 90°F, lower rate and more frequent applications are advised in order to avoid crop injury.

**PLUMS AND PRUNES:** Brown Rot Blossom and Twig Blight, Powdery Mildew, Silver Mites, Red Spider Mites, Flat Mite, Leaf Spot, Rust.

**POMEGRANATE:** Mites. Use higher rate if past mite damage has been high. If temperatures exceed 90°F, lower rate and more frequent applications are recommended to avoid crop injury.

**QUINCE:** Brown Rot, Powdery Mildew, Scab. Do not use on sulfur-sensitive varieties.

**RASPBERRY (Rubis Spp.):** Powdery Mildew, (Sphaerotheca Humuli), Red Berry Mite.

**SOYBEANS\*:** Leaf Spot, Powdery Mildew, Rust. Apply 10 to 15 lbs. per acre.

**SQUASH (PUMPKINS, SUMMER AND WINTER SQUASH):** Powdery Mildew. Sulfur can injure plants, especially when temperatures reach 90°F. Do not use on sulfur sensitive varieties.

**STRAWBERRIES:** Powdery Mildew, Red Spider Mites, Two-spotted Mites. Do not use on sulfur sensitive varieties.

**SUGAR BEETS:** Red Spider Mites (Spp.), Powdery Mildew.

**SUGARCANE:** Mites.

**SWEET POTATOES:** Leaf Spot Mites, Powdery Mildew, Red Spider Mites.

**TABLE BEETS:** Powdery Mildew, Red Spider Mites.

**TOMATOES:** Russet Mites, Powdery Mildew, Two-Spotted Mites.

**TURNIPS, PARSNIPS, HORSERADISH, RADISHES, RUTABAGAS:** Powdery Mildew, Red Spider Mites, Rust.

**WALNUTS\*, MACADAMIA NUTS\*:** European Red Mites, Pacific Mites, Almond Mites, Two-spotted Mites, Red Spider Mites, Broad Mite. Certain varieties of walnuts are sensitive to sulphur sprays under certain conditions. Do not apply unless the varieties of walnuts are not sensitive to sulphur sprays under certain conditions. Do not apply unless the varieties are known to be tolerated to sulphur in your area.

\*Not for Use in California

#### **STORAGE AND DISPOSAL**

**PESTICIDE STORAGE:** Store in a cool, dry area inaccessible to children. Store in original container only. Keep container closed when not in use.

**PESTICIDE AND CONTAINER DISPOSAL:** Non-refillable container. Do not reuse or refill this container. **If Empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.”

**NOTE:** Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on this label when used in accordance with directions under normal conditions of use; but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions not reasonably foreseeable to seller; to the extent consistent with applicable law, the buyer assumes the risk of any such use.