

49668-4

5-29-1997 *packet*

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Registration (89505E)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg. Number:  
49668-4

Date of Issuance:  
MAY 29 1997

NOTICE OF PESTICIDE:  
Registration  
X Reregistration

(under FIFRA, as amended)

Term of Issuance:  
Unconditional

Name of Pesticide Product:  
Redball EM-53 Liquid Sulfur

Name and Address of Registrant (include ZIP Code):

International Sulphur, Inc.  
c/o Ms. Peggy Galloway  
Landis International  
P.O. Box Box 5126  
Valdosta, GA 31603-5126

**Note:** Changes in labeling offering in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. If any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Document, EPA has reregistered the product listed above. Enclosed is a copy of your label stamped "Accepted". This action is taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain registration of your product.

Signature of Approving Official:

*Carl Grubbs for PM 21*

Date: MAY 29 1997

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(EM-53 LIQUID SULPHUR - 2.5 GALLON)  
(CENTER OF LABEL)



### EM-53 LIQUID SULPHUR

FOR CONTROL OF FUNGAL DISEASES,  
MITES, AND PLANT PESTS

**ACTIVE INGREDIENT:**

SULPHUR.....	53.0%
INERT INGREDIENTS .....	47.0%
TOTAL.....	100.0%

This product contains 6 lbs. of Sulphur per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

IF ON SKIN: Wash with plenty of soap and water.  
Get medical attention if symptoms persist.

IF IN EYES: Flush eyes with plenty of water. Call a  
physician if irritation persists.

*See Side Panel for Additional Precautionary Statements*

EPA REG. NO. 49668-4      EPA EST. NO. 49668-TX-1

INTERNATIONAL SULPHUR, INC.  
P.O. BOX 611  
MT. PLEASANT, TX 75456-0611

NET CONTENTS 2 1/2 GALLONS

**ACCEPTED**

MAY 29 1997

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 49668-4

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**(EM-53 LIQUID SULPHUR - 2.5 GALLON)  
(LEFT SIDE OF LABEL - (PRINTED VERTICAL))**

if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**FOR USE AS SOIL SPRAY FOR THE CORRECTION  
OF SULPHUR DEFICIENCY IN ALL PLANTS  
RECOMMENDATIONS**

For the correction of sulphur deficiencies in crops, EM-53 Liquid Sulphur is effective when placed as a soil application. It is important to treat the sulphur deficiency before visual symptoms appear to insure proper results. EM-53 also improves soil characteristics when used as a soil conditioner. When mixed with the soil EM-53 can improve water penetration, lower soil pH, and increase nutrient availability. Rates of applications will vary depending upon the climate, soil type, and method of applications. Consult your State Agricultural Experiment Station or Extension Specialist for advice in selecting treatments from this label to best fit local conditions.

**FOR USE ON TURF GRASSES:** Apply 1 pint in 10 gallons of water per 1,000 sq. ft. Begin applications in early spring and make 4 treatments per year. Do not exceed 10 pints per 1,000 sq. ft. per application. Application should be made in the early morning or late evening. Avoid application during temperatures greater than 90°F.

**RECOMMENDATIONS ON SOIL APPLICATIONS:**

EM-53 Liquid Sulphur can be mixed and applied with liquid fertilizer or water. For most crops sulphur requirements can be determined on the basis of nitrogen and phosphate fertilizer usage.

When nitrogen, and nitrogen/phosphorus fertilizers are applied, 1/6 gallon of EM-53 should be added for every 5 to 7 pounds of nitrogen.

When only phosphorus and sulphur are being applied, 1/6 gallon of EM-53 should be added for every 1.3 pounds phosphorus.

**APPLICATIONS:** EM-53 Liquid Sulphur can be applied in a band at planting time or as a side dressing shortly after planting.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**STORAGE:** Store unused product in original container only in a cool, dry area out of reach of children and animals.

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

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration, or

**WARRANTY STATEMENT**

INTERNATIONAL SULPHUR, INC. warrants that this product in its unopened package conforms to the chemical description on the label and is reasonably fit for the purposes set forth on the label when used according to directions under normal use conditions on the crops specified. There are no other warranties, expressed or implied, concerning the use of this product other than indicated on the label. This warranty does not extend to the handling or use of this product contrary to label instruction or under abnormal conditions or conditions not reasonably foreseeable to seller and buyer assumes all risk of any such use.

(EM-53 LIQUID SULPHUR - 2.5 GALLON)  
(RIGHT SIDE OF LABEL)

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS & DOMESTIC ANIMALS  
CAUTION**

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wear long-sleeved shirt and long pants, socks and shoes and waterproof gloves. Wash thoroughly with soap and water after handling.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

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

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE 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 product is toxic to fish and wildlife. Do not apply directly to water, to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when disposing of rinsate or equipment washwaters.

**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 only 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 and 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) and restricted-entry interval. 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. 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
- Protective eyewear

**GENERAL INFORMATION**

Apply this product only as specified on this label. Do not use this product for any uses other than those specified on this label. EM-53 Liquid Sulphur is formulated for use in water as a spray on fruit, vegetable and ornamental crops for the control of certain fungus diseases and mites. It may be combined in the spray tank with most of the commonly used fungicides and insecticides. Pour the specific amount of this product on surface of water in nearly filled spray tank or pre-mix in bucket before pouring into spray tank. Add balance of water to fill tank. Keep agitator running during filling and spraying operations. Do not allow mixture to stand in spray equipment. Sulphur is highly corrosive and equipment should be cleaned thoroughly after each day's spraying.

**HOMEOWNER USE**

1 level teaspoon per gallon of water is equivalent to 1 pint per 100 gallons. Make application according to specific instructions given below for those crops where rates are given in pints/hundred gallons. (For Example: 2 pints per 100 gallons are equivalent to 2 level teaspoons per gallon) 1 level teaspoon per 100 sq. feet is equivalent to 4 pints per acre. Make application according to specific instructions given below for those crops where rates are given in pints/acre. (For Example: 4 pints per acre are equivalent to 1 level teaspoon per 100 sq. ft.)

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(EM-53 LIQUID SULPHUR - 2.5 GALLON)  
(RIGHT SIDE OF LABEL - CONTINUED)

#### CHEMIGATION

Refer to supplement labeling entitled "REDBALL EM-53 LIQUID SULPHUR CHEMIGATION INFORMATION" for use directions for chemigation.

**DO NOT APPLY THIS PRODUCT THROUGH ANY IRRIGATION SYSTEM UNLESS THE SUPPLEMENTAL LABELING ON CHEMIGATION IS FOLLOWED.**

**CAUTION:** Do not use sulphur in combination with oil or within two weeks of an oil spray, or on citrus within 21 days of an oil application. Do not use sulphur on apples or other sensitive crops when shade temperatures exceed, or likely to exceed 90° F. Do not apply or allow sulphur to drift to Cucurbits (cucumber, cantaloupe, melon, squash) or tung. To do so may result in severe fruit and leaf injury.

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**(EM-53 LIQUID SULPHUR - 2.5 GALLON)  
(BACK OF LABEL)**

**RECOMMENDATIONS**

**FRUIT TREE CROPS:** Unless otherwise specified for specific crops, dosage rates are given as pints per 100 gals. water for use in a thorough coverage spray. The total amount of sulphur per acre should be 1 to 4 gals. depending on the size of the trees. Because of variations in the types of spray equipment used, a range of low and high rates is listed. For high volume sprayers (output 800 to 1000 gals. spray per acre) use the low rate per 100 gals. For low volume sprayers (output 20 to 300 gals. spray per acre) use the high rate per 100 gals. Apply in sufficient water for thorough coverage.

**For Aerial Application:** Use a minimum of 5 gals. of finished sprya per acre.

**APPLE, PEAR:**

Scab:

Pre-bloom through calyx sprays...1 1/2 to 3 1/2 pints

Cover sprays.....3/4 to 2 pints

**Powdery Mildew:**

Pre-bloom through calyx sprays.....3 pints

Cover sprays.....2 pints

**CHERRY, PLUM, PRUNE:**

**Brown Rot, Leafspot:**

Pink and bloom sprays.....1 1/2 to 3 1/2 pints

Petal fall, shuck & cover spray.....3/4 to 1 3/4 pints

**CITRUS:**

**Rust Mite, Clover Mite:**

Apply sprays November thru May...3/4 to 4 1/2 pints

**THRIPS:** (Early spring treatment for the reduction of thrips population.) Apply 1 to 2 gallons per acre in sufficient water for thorough coverage. Make application after spray flush has made 3 inch growth. Repeat if necessary. Do not apply within 21 days of an oil application.

**PEACH, NECTARINE:** Powdery Mildew, Brown Rot, Scab, Thrips:

Pink and bloom sprays.....1 1/2 to 3 1/2 pints

Petal fall, shuck & cover sprays...2/3 to 1 3/4 pints

Applications to mature nectarines may cause discoloration.

**FIELD AND VINE CROPS:** Unless otherwise specified for specific crops, dosage rates are given as pints of EM-53 Liquid Sulphur per acre. This product should be applied by ground equipment, aircraft or sprinkler irrigation systems in sufficient water to provide thorough coverage.

**BEANS:** (Dry, Colored, Green, Snap, Lima) Powdery Mildew, Rust: Apply 8 pints per acre in sufficient water for thorough coverage. Begin application at the first sign of disease. Repeat at 7 to 14 day intervals to keep new growth protected.

**COTTON:** Mites, Thrips, Fleahoppers: Apply 2 pints for early season control and up to 1 gallon for mid to late season control.

**GRAPES:** Powdery Mildew: Apply 1 to 2 pints per 100 gallons water, maximum of 8 pints per acre in spring and summer. Make first application when shoots are 6 to 8 inches long, second when shoots are 12 to 15 inches long, and third about bloom stage. The timing, rate, and number of applications will vary with local conditions. Consult State Agricultural Extension Service or State Agricultural Experiment Stations in your own region for specific information. Follow the **USE PRECAUTIONS** on this label.

**PEANUTS:** Rust: Apply 2 to 4 pints per acre in enough water for good coverage. Begin 40 to 60 days after planting. Use 7 to 14 day intervals as long as needed to control rust.

**SUGAR BEETS, TABLE BEETS:** Powdery Mildew, Mites: Apply 8 to 16 pints per acre in sufficient water as needed. Repeat applications should be made at 10-30 day intervals as necessary throughout the season.

**POTATOES, PEAS, BROCCOLI, BRUSSEL SPROUTS, CABBAGE, CAULIFLOWER:** Powdery Mildew, Mites: Apply 2 to 7 pints per acre. Start in early leaf stage. Repeat as necessary.

**STRAWBERRIES:** Powdery Mildew: Apply 2 pints at first sign of infection and repeat at 3 week intervals. For strawberries that will be canned, discontinue application of sulphur well before harvest in accordance with local canner's recommendations.

**TOMATOES:** Tomato Russet Mite: Apply 1/2 to 1 gallon per acre depending on the size of plants. Use full coverage sprays.

**ONIONS, CARROTS:** Mites, Powdery Mildew: Apply 2 to 12 pints at first sign of mites or disease and repeat as necessary.

**WHEAT, OATS, BARLEY, RYE, SORGHUM, CORN, SOYBEANS:** Mites, Powdery Mildew: Apply 4 to 20 pints per acre. Repeat as necessary.

**WALNUTS:** Mites: Apply 8 to 28 pints per acre. Repeat as necessary. **CAUTION:** Certain varieties of walnuts are sensitive to sulphur sprays.

**ORNAMENTALS:** (Aster, Carnations, Cherry Laurel, Chrysanthemums, Crepe Myrtle, English Ivy, Gladiolus, Hollyhock, Laurel, Petunia, Sage, Sunflowers, Sweet Peas, Violets, Zinnias): Powdery mildew and leaf spots caused by fungi imperfecti and ascomycetes: Apply 4 to 8 pints per 100 gallons. Begin when disease first appears and repeat at 5 to 10-day intervals.

**ROSES:** Black Spot, Brown Canker, Leaf Spot, Powdery Mildew, Rust: Apply 4 to 8 pints per 100 gallons. Begin when disease first appears and repeat at 5 to 10-day intervals.

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**(EM-53 LIQUID SULPHUR - 2.5 GALLON)  
(BACK OF LABEL - CONTINUED)**

**CHIGGER CONTROL :** For control of chiggers in yard, spray entire lawn, flower garden, shrubs, and any place chiggers may hide. This should be done 1 - 2 days before protection is desired and should be repeated at weekly intervals. Apply approximately 10 gallons per acre. One gallon will cover 2,000 - 2,500 sq. ft.

**A032294**

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### EM-53 LIQUID SULPHUR

#### CHEMIGATION INFORMATION

##### GENERAL INSTRUCTIONS:

Apply this product only through sprinkler irrigation system(s), including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service Specialist, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

##### RECOMMENDATIONS:

Keep agitator running in supply tank during irrigation operations. Apply continuously for the duration of the water application.

##### Mixing instructions for dilution of pesticide in tank:

Pour label-recommended amount of RED BALL EM-53 LIQUID SULPHUR on surface of water in nearly filled mixing tank or pre-mix in a bucket before pouring into mixing tank. Keep agitator running during filling. Do not allow mixture to stand in irrigation equipment. Sulphur is highly corrosive and equipment should be cleaned thoroughly after each day's spraying.



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## SPRINKLER CHEMIGATION

### GENERAL INSTRUCTIONS:

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 which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems 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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Manufactured by:  
International Sulphur, Inc.  
Mt. Pleasant, Texas 75455