

PM 23
1471-127

10F4

ACCEPTED

JUN 23 1987

U.S. of the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 1471-127

ELANCO ID 5947

Herbicide
Sonar
A.S. TM

Net Contents 1 Quart

A herbicide for management of aquatic
weeds in fresh water ponds, lakes, reservoirs,
drainage canals and irrigation canals.

Active ingredient:
"Sonar" (1-methoxy-3-propyl-5-[(3-
trifluoromethylphenyl)-4,1,1H-pyrazol-5-yl]-
pent-1-yn-3-ol) 41.7%
Inert ingredients 58.3%
Contains 4 pounds active ingredient per gallon.
"Sonar" is the registered trademark for Elanco Products Division.

Keep Out of Reach of Children.

CAUTION

See back panel for additional precautionary statements.
EPA Reg. No. 1471-127

EPA Est. 1471-IN-5; 37429-GA-01
Superscript used as first letter of lot number

FN 0851

WU 0740 AMX

LOT

Elanco Products Company
A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.

Directions for Use Read All Directions Carefully Before Applying

See literature on container for complete directions for use.
It is a violation of Federal Law to use this product in a manner inconsistent with its
labeling.
Shake well before using.

Precautionary Statements

Hazards to Humans and Domestic Animals CAUTION

Harmful if swallowed, absorbed through skin, or if inhaled. Avoid breathing of
spray mist or contact with skin, eyes, or clothing. Wash thoroughly with soap and
water after handling. Wash exposed clothing before reuse.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water. Get
medical attention if ingestion persists. If swallowed, call a physician or poison control
center. Drink one or two glasses of water and induce vomiting by touching back of
throat with finger. Do not induce vomiting or give anything by mouth to an
unconscious person. If breathing difficulty occurs, move individual to fresh air and get
medical attention.

Environmental Hazards

Follow use directions carefully so as to minimize adverse effects on nontarget
organisms. In order to avoid impact on threatened or endangered aquatic plant
or animal species, users must consult their State Fish and Game Agency or the
U.S. Fish and Wildlife Service before making applications.

Do not contaminate water by cleaning of equipment or disposal of wastes. Trees and
shrubs growing in water treated with Sonar may be injured. Do not spray in low-water
or brackish water. Do not apply in seas, ponds, or other bodies of water where
crayfish farming is performed.

Lowest rates should be used in shallow areas where the water depth is considerably
less than the average depth of the entire treatment site, for example, shallow
shoreline areas.

STORAGE AND DISPOSAL

Store/Keep Store in original container only. Do not store near food or feedstuffs. In
case of loss or spill, use absorbent material to contain liquids and dispose as
waste.

Pesticide Disposal: Do not contaminate water, food or feed by storage or
disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide,
spray mixture, or waste is a violation of Federal Law. If these wastes cannot be
disposed of by use according to these instructions, contact your State Pesticide
or Environmental Control Agency, or the nearest Waste Representative at the
nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or
recycling, or incineration and disposal of in a sanitary landfill, or incineration,
if allowed by State and Local authorities. If burning, if burned, stay out of
smoke.

WU 0751 AMX

ID 5947

BEST AVAILABLE COPY

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Sonar[®] A.S.

20F 4

A herbicide for management of aquatic weeds in fresh water ponds, lakes, reservoirs, drainage canals and irrigation canals.

Directions For Use—Read All Directions Carefully Before Applying.

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

Consult the appropriate state or local water authorities before applying this product. Permits may be required by state or local public agencies.

General Information

Sonar is a highly effective broad spectrum aquatic herbicide. Sonar is not corrosive to application equipment.

Sonar is absorbed from water by plant shoots and from hydrosol by the roots of aquatic vascular plants. It is important to maintain the maximum concentration of Sonar in contact with the weeds as long as possible. Rapid water movement or any condition which results in rapid dilution of Sonar treated water will reduce its effectiveness. Once Sonar is taken into the plant, the formation of carotene is inhibited. Its absence exposes chlorophyll to photodegradation and in seven to ten days results in plants with white (chlorotic) or pink growing points. Under optimum conditions 30 to 90 days are required before the desired level of aquatic weed management is achieved with Sonar.

For best results, apply Sonar prior to initiation of weed growth or when weeds begin actively growing.

Weed Control Information

Sonar is effective in controlling the following vascular aquatic weeds:

Floating Weeds:

Common duckweed (*Lemna minor*)*

Emerged Weeds:

Creeping Waterprimrose (*Ludwigia peploides*)

Spatterdock (*Nuphar luteum*)

Waterpurslane (*Ludwigia palustris*)

Waterlily (*Nymphaea* spp.)

Submersed Weeds:

Bladderwort (*Utricularia* spp.)

Common coontail (*Ceratophyllum demersum*)

Common Elodea (*Elodea canadensis*)

Egeria, Brazilian Elodea (*Egeria densa*)

Hydrilla (*Hydrilla verticillata*)

Naiad (*Najas* spp.)

Pondweed (*Potamogeton* spp.)

Watermilfoil (*Myriophyllum* spp.)

Shoreline Grasses:

Paragrass (*Brachiaria mutica*)

Reed Canarygrass (*Phalaris arundinacea*)

*Controlled only with a surface application of Sonar AS.

Sonar provides partial control of the following vascular aquatic weeds:

American lotus (*Nelumbo lutea*)

Arrowhead (*Sagittaria* spp.)

Bulrush (*Scirpus* spp.)

Cattail (*Typha* spp.)

Fanwort, Cabomba (*Cabomba caroliniana*)

Maidencane (*Panicum hemitomon*)

Rush (*Juncus* spp.)

Smartweed (*Polygonum* spp.)

Spikerush (*Eleocharis* spp.)

Tapegrass, American Eelgrass (*Vallisneria americana*)

Torpedogras (*Panicum repens*)

Application and Mixing Directions

The aquatic weeds present in the area to be treated should first be identified to insure that the weeds are susceptible to Sonar. It is important to determine the area (acres) to be treated and the average depth in order to select the proper Sonar rate. Apply Sonar only one time per year to a treatment site.

Shake Sonar well before using. Add the recommended amount of Sonar to water in the spray tank during the filling operation. Agitate while filling and during spraying. Surface or subsurface application of the spray can be made with conventional spray equipment. Sonar can also be applied near the surface of the hydrosol using weighted trailing hoses. A spray volume of 5 to 100 gallons per acre may be used. Sonar may also be diluted with water and the concentrated mix metered into the pumping system.

Application Rates

Application to ponds

Sonar may be applied to the entire surface area of a pond.

Average Water Depth of Treatment Site	Quarts of Sonar A.S. Per Treated Surface Acre
Less than 3 feet	0.5 -0.75
Three to 5 feet	0.75-1
Greater than 5 feet	1 -1.5

Within these rate ranges, the higher rate should be used at the greater water depth or where there is a dense weed population.

Application to lakes and reservoirs

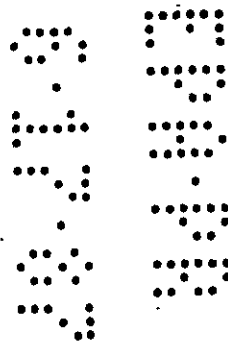
In lakes and reservoirs, Sonar should be applied to areas that are greater than five acres. Treatment of narrow strips such as boat lanes or shorelines may not produce satisfactory results due to dilution with untreated water. In reservoirs, do not apply Sonar within one-fourth mile (1320 feet) of any potable water intake.

Average Water Depth of Treatment Site	Quarts of Sonar A.S. Per Treated Surface Acre
Three to 5 feet	0.75-1.5
Five to 10 feet	1.5 -3
Greater than 10 feet	3 -4

Within these rate ranges, the higher rate should be used at the greater water depth or where there is a dense weed mass.

Application to Drainage Canals and Irrigation Canals

In drainage and irrigation canals Sonar should be applied at the rate of 2 quarts per treated surface acre. To achieve satisfactory control, water flow must be restricted for a minimum of seven days to prevent dilution of Sonar. Use an application pattern that will provide uniform distribution and avoid concentration of the herbicide.



Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Human: Harmful if swallowed, absorbed through skin, or if inhaled. Avoid breathing of spray mist or contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. If swallowed, call a physician or poison control center, drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. If breathing difficulty occurs, move individual to fresh air and get medical attention.

Environmental Hazards

Follow use directions carefully so as to minimize adverse effects on nontarget organisms. In order to avoid impact on threatened or endangered aquatic plant or animal species, users must consult their State Fish and Game Agency or the U.S. Fish and Wildlife Service before making applications.

Do not contaminate water by cleaning of equipment or disposal of wastes. Trees and shrubs growing in water treated with Sonar may be injured. Do not apply in tidewater or brackish water. Do not apply in lakes, ponds, or other bodies of water where crayfish farming is performed.

Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas.

STORAGE AND DISPOSAL

Storage: Store in original container only. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

Pesticide Disposal: Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

Insert #1 →

Disclaimer of Warranties

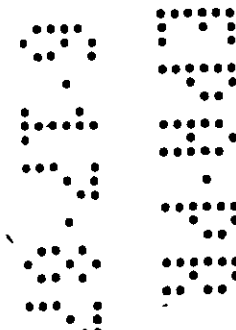
The manufacturer makes no warranties concerning this product or its use, which extend beyond the description on the label. All other warranties, express or implied, including but not limited to, any implied warranties of merchantability and fitness for a particular purpose, are disclaimed. All statements concerning this product apply only when used as directed.

Limitation of Damages

Elanco's liability, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the return of the amount of the purchase price of the Sonar and under no circumstances shall Elanco be liable for special, indirect or consequential damages.

Literature revised February 28, 1986

Elanco Products Company • A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.
PI 3001 AMP



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SPECIAL PRECAUTIONS

A. CHEMIGATION

Do not apply SONAR A.S. through any type of irrigation system.

B. IRRIGATION

Irrigation with SONAR treated water may result in injury to the irrigated vegetation. Elanco recommends informing those who irrigate from SONAR treated areas of the irrigation timeframes presented in the table below. These timeframes are suggestions which should be followed to reduce the potential for injury to vegetation irrigated with SONAR treated water.

<u>Application Site</u>	<u>Established Tree Crops</u>	<u>Established Row Crops/ Turf/Plants</u>	<u>Newly Seeded Crops/ Seedbeds or Areas to be Planted</u>
			<u>Including Overseeded Golf Course Greens</u>
-----Days after Application-----			
¹ Ponds & Static Canals	7	30	30
Canals	7	14	30
² Lakes & Reservoirs	7	14	14

¹ A pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

² In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation restrictions.