

ACCEPTED

JUL 11 1988

TECHNICAL LINDANE

Index to Federal Insecticide, Fungicide, and Rodenticide Act as amended for the pesticide registered under EPA Reg. No. 5481-225

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. **STORAGE:** Store product in its original labeled container in a cool, dry, locked place designated as Technical Lindane, out of reach of children. **PESTICIDE 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 disposed of in a sanitary landfill, or by other approved State and local procedures.

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5481-225

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AN INSECTICIDE FOR FORMULATING USE ONLY

This Pesticide may Only Be Used in the Formulation of an Insecticide. Formulators Using This Product are Responsible for Obtaining EPA Registration for their Formulated Products which may be Labeled For the Use Patterns as Found Listed on this Label.

ACTIVE INGREDIENT:

Lindane (gamma isomer of benzene hexachloride) 99.5%

INERT INGREDIENTS:..... 0.5%

Total 100.0%

KEEP OUT OF REACH OF CHILDREN WARNING

STATEMENT OF PRACTICAL TREATMENTS

IF SWALLOWED: Call a physician or Poison Control Center immediately. Have victim drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person.

IF INHALED: Remove victim to fresh air. Apply artificial respiration if needed. Call a physician immediately.

IF ON SKIN: Remove contaminated clothing & wash affected areas with soap and water. Get medical attention if irritation persists.

IF IN EYES: Flush eyes with plenty of water. Call a physician immediately.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: May be fatal if swallowed, inhaled or absorbed through the skin. Do not breathe vapors. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling and before eating or smoking. Do not contaminate feed or foodstuffs.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds and other wildlife. Do not discharge effluent containing this active ingredient into lakes, streams, ponds, estuaries, oceans or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewers, systems without previously notifying the sewage treatment plant authority. For guidance, contact your State water Board or Regional Office of the EPA. Do not contaminate water by cleaning of equipment or disposal of wastes.

EPA REG. NO. 5481-225

EPA EST. NO. 5481-CA-1

TECHNICAL INFORMATION

Refer to Lindane Technical Bulletin for manufacturing data available on request from the AMVAC CHEMICAL CORPORATION.

Net Weight 30 Pounds

AMVAC CHEMICAL CORPORATION
4100 EAST WASHINGTON BLVD.
LOS ANGELES, CA 90023

USE PATTERNS FOR LINDANE "END-USE PRODUCT"

This product may be used for formulations ONLY into End-Use Products for use in the following "USE PATTERNS".

TERRESTRIAL FOOD USES ON

ALFALFA (SEED TREATMENT ONLY); APPLE, APRICOT, ASPARAGUS, BARLEY (SEED TREATMENT ONLY); BEANS, DRY (SEED TREATMENT ONLY); BEANS, SUCCULENT (SEED TREATMENT ONLY); BEETS (SEED TREATMENT ONLY); BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CARROTS (SEED TREATMENT ONLY); CAULIFLOWER, CELERY, CHERRIES, CLOVER (SEED TREATMENT ONLY); COLLARDS, CORN (SEED TREATMENT ONLY); COTTON (SEED TREATMENT ONLY); CUCUMBERS, EGGPLANT, FLAX (SEED TREATMENT ONLY); GRAPES, KALE, LENTILS (SEED TREATMENT ONLY); LETTUCE, MANGOES, MELONS INCLUDING CANTALOUPE AND WATER-MELONS); OATS (SEED TREATMENT ONLY); OKRA, ONION, DRY BULB; PEACHES, PEARS, PEAS, INCLUDING COWPEAS (SEED TREATMENT ONLY); PECANS, PEPPERS, PINEAPPLES, PLUMS, INCLUDING PRUNES, PUMPKINS, RADISHES (SEED TREATMENT ONLY); RYE (SEED TREATMENT ONLY); SAFFLOWER (SEED TREATMENT ONLY); SORGHUM (SEED TREATMENT ONLY); SOY-BEAN (SEED TREATMENT ONLY); SPINACH, SQUASH, INCLUDING WINTER & SUMMER; STRAWBERRIES, SUDANGRASS (SEED TREATMENT ONLY), SUGAR BEETS (SEED TREATMENT ONLY), SUNFLOWER (SEED TREATMENT ONLY), TOMATOES, AND WHEAT (SEED TREATMENT ONLY).

TERRESTRIAL NON-FOOD CROP

TOBACCO

TERRESTRIAL NON-FOOD USES

ORNAMENTAL EVERGREENS (INCL. ARBORVITAE, DOUGLAS FIR, HEMLOCK, JUNIPER, PINES SPP. (AUSTRIAN-SCOTCH-SUGAR-WHITE-DIGGER-JAPANESE- BLACK-MONTEREY- PONDEROSA) NORWAY-WHITE SPRUCE; ORNAMENTAL DECIDUOUS TREES (INCL. ASH, ASPEN, BEECH, BIRCH, BOXELDER, CHESTNUT, COTTONWOOD, DOGWOOD, ELM, FLOWERING PLUM, FLOWERING ORNAMENTAL FRUIT TREES, HAWTHORN, HOLLY, LILAC, LINDEN, LOCUST, MAPLE, MOUNTAIN ASH, OAK, PYRACANTHA, RHODODENDRON, SYCAMORE, WILLOW; ORNAMENTAL HERBACEOUS PLANTS (INCLUDING AZALEA, CAMELLIA, CHRYSANTHEMUMS, DAFFODIL, DAHLIAS, GLADIOLUS, HYACINTH, IRIS, LILIES, NARCISSUS, TULIPS; ORNAMENTAL WOODY SHRUBS (INCL. AZALEAS, HIBISCUS, HOLLY, ROSES (INCL. NURSERY STOCK), ORNAMENTAL LAWNS,

GREENHOUSE NON-FOOD CROP (Does Not Include Greenhouse Smoke Fumigation)

ORNAMENTAL PLANTS : AZALEAS, CAMELLIA, CARNATIONS, CHRYSANTHEMUMS, GARDENIAS, GERANIUMS, GLADIOLUS, PRIMROSE, RHODODENDRON, ROSE, & SNAPDRAGONS.

LIVESTOCK USES

BEEF CATTLE, HORSES, HOGS, SHEEP, GOATS, AND MULES.

DOMESTIC OUTDOOR

LAWNS AND ORNAMENTAL PLANTS OUTDOOR TREATMENTS FOR ROACHES, FLEAS, CHIGGER MITES, & MOSQUITOES,

HUMAN USES

HUMAN SKIN/CLOTHING (MILITARY USE ONLY).

NOTICE: This product conforms to its chemical description and is reasonably fit for the purpose stated on the label, when used in accordance with directions under normal conditions of use. Manufacturer is not responsible for the use of this product contrary to the label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to the manufacturer and/or seller and the buyer assumes the risk of any such use.

AMVAC CHEMICAL CORPORATION

JUL 11 1988

Agricultural Chemicals Technical Bulletin TECHNICAL LINDANE. . . . EPA Reg. No. 5481-225

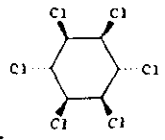
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 5481-225

LINDANE - 1,2,3,4,5,6-Hexachlorocyclohexane

Lindane is a high purity free flowing crystalline product, white in color and odorless; it readily passes through a 10 mesh screen. A powdered material it can be supplied, upon special order, of which 90% passes through a 325 mesh screen (wet analysis).
Lindane, by virtue of its chemical structure and biological properties, holds a unique place among chlorinated organic insecticides. Lindane is the gamma isomer of benzene hexachloride and should not be confused with BHC which is a mixture of several stereoisomers including gamma. Lindane is a relatively persistent and broad spectrum insecticide.

SPECIFICATIONS

Active Ingredient 99.5% Minimum
Lindane (gamma isomer of hexachlorocyclohexane)
Inert Ingredients 0.5% Maximum
Other hexachlorocyclohexane isomers.



SHIPPING CONTAINERS & WEIGHT

Shipments are made in drums with polyethylene liners. Content is 110 pounds (50 Kg) net weight.
MODE OF ACTION

Lindane controls insect and arachnid pests in three different ways. It acts as a contact poison, effective against ants, aphids, fleas, flies, lice, mosquitoes and ticks. It is a stomach poison to leaf feeding insects such as armyworms, caterpillars and grasshoppers. It is a vapor toxicant or soil fumigant against soil-borne insects such as cutworms, seed corn maggots, white grubs & wireworms.

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PRECAUTIONARY LABELING TECHNICAL LINDANE

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Technical Lindane is a white crystalline solid with a melting point of 112°C. It is stable to light, heat, air and strong acids but decomposes to trichlorobenzene and HCL in alkali. It is soluble in most organic solvents and is soluble in water at 10 parts per million (ppm) at 20°C. Other chemical and physical properties include vapor pressure of 9.4 x 10⁻⁶ mm of HG at 20°C and specific gravity is 1.85.

Extensive laboratory testing with laboratory animals has established the following values for lindane acute toxicity. LD₅₀ ranges in experimental mammals. Species LD₅₀ ranges for different routes of administration as mg/kg of animal bodyweight.

	l.v.	i.m.	i.p.	s.c.	p.o.	dermal	Presentation
<u>Rat</u>		35-200	350	88-125	50-400	500	Oil
					200		Acetone
					170-300		Paraffin
<u>Mouse</u>						900-1000	Water
						2000	Xylene
							Crystalline
<u>Guinea Pig</u>							
							Oil
							Acetone
<u>Rabbit</u>							50% Paraffin
							Crystalline
							Oil
<u>Mouse</u>							50% Paraffin
							Ac. stor.
							Dimethylphthalate
<u>Rabbit</u>							Vanishing Cream

Reference Ullman, E.; Lindane: Monograph of an Insecticide, Germany: Verlag K. Schillinger, 1982, p. 37

Toxicity Acute Oral LD 50 Male Rates 88 mg/kg, Female 91 mg/kg.
Acute Dermal LD 50 Male Rates 1000 mg/kg; Female 900 mg/kg

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4100 EAST WASHINGTON BLVD
LOS ANGELES, CA 90023