

DES-X™

INSECTICIDAL SOAP CONCENTRATE

May be used up to day of harvest

 FOR ORGANIC PRODUCTION

ACTIVE INGREDIENT	By Wt.
Potassium Salts of Fatty Acids	47%
OTHER INGREDIENTS	53%
TOTAL	100%

Contains 4.07 lb Technical per Gallon

Net Contents: 2.5 Gallons
EPA Reg. No. 67702-22-70051
EPA Est. No. 48498-CA-1

Manufactured for
Certis USA, LLC
9145 Guilford Rd, Suite 175
Columbia, MD 21046

CERTIS



Sold under a license of Neudorff

KEEP OUT OF REACH OF CHILDREN WARNING AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail).

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury. Causes skin irritation. Do not get in eyes, on skin or on clothing. Wear protective eye gear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.
Hot Line Number: 1-800-255-3924

- Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, and vitron
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. When mixing and loading wear a chemical resistant apron. When cleaning equipment add a chemical resistant apron. Follow the 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.

Personal Protective Equipment (PPE) Requirements:

Handlers who may be exposed to the concentrate through mixing, loading, application, and other tasks must wear:

- Protective eyewear
- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant footwear and socks

ENVIRONMENTAL HAZARDS

This product may be hazardous to aquatic invertebrates. Do not apply directly to water, areas where surface water is present, or to intertidal areas below the mean high water mark. Do Not contaminate water by cleaning of equipment or disposal of equipment wash waters.

GENERAL INFORMATION

- DES-X™ INSECTICIDAL SOAP CONCENTRATE can be used to treat plants prior to biological control agent release and to treat "hot spots" for pest control in greenhouses with subsequent release of beneficial mites and insects.
- Compatible with biological control agents, beneficial insects, and mites.

Mode of Action

- DES-X™ INSECTICIDAL SOAP CONCENTRATE is a contact killer for both insect and mite pests. It penetrates the body of pests and results in rapid death. DES-X™ INSECTICIDAL SOAP CONCENTRATE kills pests by disrupting membrane and cellular function.
- DES-X™ INSECTICIDAL SOAP CONCENTRATE contains specially selected fatty acid salts (soaps) chosen for effective pest control.
- DES-X™ INSECTICIDAL SOAP CONCENTRATE has been formulated to provide optimum spreading.
- DES-X™ INSECTICIDAL SOAP CONCENTRATE is effective against the adult, larval, and nymph stages of pests. Pupal stages of some pests (e.g. whitefly) may also be affected.
- Ideal as part of an Integrated Pest Management System.

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), restricted-entry interval, and notification to workers. 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 area during the restricted-entry interval of 12 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 over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, and vitron
- Chemical-resistant footwear and socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

NON-AGRICULTURAL USE REQUIREMENT

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

DIRECTIONS FOR MIXING

For 2% formulation, mix 2 gal of product/100 gal of water (4.07 lb Tech/gal). Add sufficient water to the mixing tank to allow proper agitation by pump or paddles. Continue stirring while adding first the DES-X™ INSECTICIDAL SOAP CONCENTRATE then the remaining water. Hard water in excess of 300 ppm should be conditioned to reduce its hardness prior to mixing with DES-X™ INSECTICIDAL SOAP CONCENTRATE.

TANK MIXING

DES-X™ INSECTICIDAL SOAP CONCENTRATE may be combined with other pesticides to broaden the target spectrum, improve the level of kill, provide residual kill and enhance coverage. When used as a tank-mix, observe all directions for use, crops, use rates, dilution ratios, precautions, and limitations, which appear on the tank mix product label. Follow the label directions for the most restrictive of label precautions and limitations. This product should not be mixed with any product, which prohibits such mixing. Tank mixtures are permitted only in those states where the tank mix partner is registered. For tank mixing with companion pesticides, DES-X™ INSECTICIDAL SOAP CONCENTRATE should be used at a rate of 1% formulation (1 gallon of concentrate to 100 gallons of water). For example, certain caterpillars and leaf feeding beetles (e.g. Elm leaf beetle) can be controlled with tank mixes of 1 gallon of DES-X™ INSECTICIDAL SOAP CONCENTRATE per 100 gallons of water plus a standard pesticide.

Order of Tank Mixing:

- Water
- Water conditioner (if needed)
- Conventional pesticide

Add other products in the following order:

- Water soluble bags
- Wettable powders
- Dry flowables
- Liquid flowables
- ECs
- Soluble materials such as fertilizers
- DES-X™ INSECTICIDAL SOAP CONCENTRATE

Also, if appropriate, give a Tank Mix Compatibility Test: Using a 2 quart jar, add the proportionate amounts of the products (in the order recommended above) to 1 qt water. After thorough mixing, let it stand for 5 minutes. If the combination remains mixed or can be re-mixed readily, it is compatible. Once compatibility is proven, use the same procedure for adding required products to the spray tank.

Manzate and dithane products are incompatible with DES-X™ INSECTICIDAL SOAP CONCENTRATE

Combining this product with sulfur or applying this product within 3 days of sulfur application may increase the plant damage caused by sulfur on sensitive plants (e.g. grape). Do not tank mix DES-X™ INSECTICIDAL SOAP CONCENTRATE with sulfur when temperatures are higher than 90°F.

Do not allow tank mixes to sit for long periods. Mix and spray as soon as possible.

DES-X™ INSECTICIDAL SOAP CONCENTRATE alone only requires stirring prior to use. Tank mixes of DES-X™ INSECTICIDAL SOAP CONCENTRATE with other pesticides should continue to be stirred throughout use. If using equipment without pump or paddle, shake often during use. Flush fluid in sprayer hose lines back into the tank if stirring is interrupted.

APPLICATION INSTRUCTIONS

For field applications apply 2% formulation, 2 gal of product/100 gal of water (4.07 lb Tech/gal), at a rate of 75 to 200 gal/acre (6.10 to 16.26 lbs ai/acre) using ground spray equipment. For best results commence treatment when infestation is first noticed. Thoroughly spray insect pests on plants with diluted product to wetting. Minimize run-off to reduce plant injury on sensitive plants. DES-X™ INSECTICIDAL SOAP CONCENTRATE is a contact spray and is effective in its liquid state. Pests need to be contacted with spray solution to be effective. Efforts should be made to thoroughly reach all plant parts including undersides of leaves.

Repeat treatment every one to two weeks as needed. Apply to a maximum of three consecutive applications to ensure plant injury does not occur. Additional applications may be possible if previous experience with repeat applications of the product under the same conditions have not produced plant injury. May be used on edible crops up to and including day of harvest after a minimum spray interval of 12 hours.

PESTS/SITES

DES-X™ INSECTICIDAL SOAP CONCENTRATE will control insect pests such as: adelgids (woolly aphids), aphids, lacebugs, mealybugs, mites, leafhoppers, scale insects, plant bugs, sawfly larvae (e.g. pear and rose slugs), psyllids, tent caterpillars, spider mites, earwigs and whitefly.

CROP		PEST	
Fruit trees such as: apples apricots cherries peaches	pears prunes nectarines	aphids mites plant bugs leafhoppers earwigs mealy bugs	psyllids sawfly larvae (pear slugs) scale insects spider mites tent caterpillars
Nut trees such as: pecans almonds			
citrus		aphids mealy bugs mites scale insects	
olives		aphids scale insects spider mites	

Additional recommendations for this use:

- For tent caterpillars apply at a rate of 3% formulation (3 gal of product/100 gal of water) directly on larvae.
- Do not exceed a maximum spray volume of 400 gal/acre on apples.
- Use with care on pears after delayed dormant stage due to potential for fruit marking.
- Do not exceed a maximum rate of 100 gal/acre on smooth skinned stone fruit up to fruit formation.
- Do not exceed a maximum rate of 175 gal/acre on peaches.
- Do not use on yellow skinned nectarines.
- If sooty mold is present on citrus, application of product may result in fruit marking.

CROP		PEST	
Small fruits: grapes strawberry blueberry	raspberry cranberry	aphids mealy bugs mites	scale insects leafhoppers plant bugs

Additional recommendations for this use:

- Do not use on table grapes once they become 6-7 mm in diameter (removes waxy bloom) or use at lowest recommended rate (75 gal/acre).

CROP		PEST	
Ornamental and shade trees: flower and foliage plants birch flowering cherry dogwood evergreens hawthorn holly	magnolia maple oak flowering peach privet pyracantha sycamores	aphids lace bugs mealy bugs mites plant bugs psyllids	sawfly larvae leafhoppers spider mites whiteflies woolly aphids (adelgids) tent caterpillars
flowering foliage bedding plants houseplants-greenhouse and outdoors		aphids lace bugs mites scale insects spider mites	leafhoppers whiteflies sawfly larvae (rose slugs) earwigs

Additional recommendations for this use:

- For tent caterpillars apply at a rate of 3% formulation (3 gal of product/100 gal of water) directly on larvae.
- For Cooley spruce gall adelgids apply at a rate of 4% formulation (4 gal of product/100 gal of water). Test for tree sensitivity before applying at this rate. Applications in early spring before bud break or in the fall on hardened off foliage is recommended.

CROP			PEST	
alfalfa canola cotton peanuts	soybeans tobacco wheat		aphids flea hoppers mites plant bugs whiteflies	
corn (field, sweet)			aphids	
sugar beets			mites aphids	
Vegetables-field and greenhouse: e.g.:			aphids mites plant bugs whiteflies	
asparagus beans beets broccoli brussel sprouts cabbage cauliflower celery collards	corn cucurbits eggplant herbs and spices kale lettuce lima beans melon mustard greens	peas potatoes peppers radishes spinach squash tomatoes turnips		
hops banana pineapple			aphids leafhoppers mealy bugs spider mites	plant bugs scale insects whiteflies

Additional recommendations for this use:

- To control green peach aphid, tank mixing with another pesticide is necessary.
- When applications are made in less than 25 gallons of water per acre, use 2 quarts of product per acre.

USE RESTRICTIONS

Do not spray when plants are under stress. Do not apply to new seedlings and transplants without determining sensitivity (phytotoxicity) first. Avoid spraying during full sun. Spray early in morning or evening or when overcast. Do not apply to evergreens during drought and use caution when tender new foliage is present. If concerned about sensitivity of plants, apply to individual plants or small areas and wait a couple days to determine if plant damage occurs prior to treatment of larger areas.

Do not use on sweet peas, nasturtiums, delicate ferns, or calmeria and Italia varieties of grapes.

Use with care on azaleas, bleeding heart, camellia, corn, euphorbia, fuchsia, gardenia, geraniums, impatiens, hawthorn, horse chestnut, jade plant, japanese maple, lantana, mountain ash, ornamental ivy, palms, succulents. Sensitivity varies with plant varieties. If concerned about sensitivity of plants, apply to individual plants or small areas of plants and wait to determine if plant damage (phytotoxicity) occurs before treating larger areas.

Use with care on blooms. Determine sensitivity before spraying.

Poinsettias may be sensitive. Do not apply after coloring of bracts has begun.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store this product in its original container and keep in a secure storage area out of reach of children and domestic animals.

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: (1) Plastic containers-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, but burning. If burned, stay out of smoke.

WARRANTY

Certis USA, LLC warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage, or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.