



How The Revisions to EPA's Worker Protection Standard (WPS) Affect Organic Farms/Growers

EPA Office of Pesticide Programs
June 2016



Acknowledgements

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Outline

- WPS Background
- What is a Pesticide / Organic Pesticides
- Scope and Applicability of the WPS
- WPS Requirements at a Glance
- Summary of Key WPS Revisions
- Implementation Schedule
- Questions?
- Additional Examples of “Organic” Pesticide Product Labels



WPS Background



What is the WPS?

- Federal Regulation
- 1974 EPA published 40 CFR, Part 170

*“A **Worker Protection Standard** for Agricultural Pesticides”*

- Rule is intended to reduce the risks of illness or injury to workers and handlers resulting from occupational exposures to pesticides in the production of agricultural plants
- Rule was Revised in 1992 with Amendments added in 1995, 1996, and 2004.



Revised WPS Rule

- Published in Federal Register November 2, 2015
- MOST new rule requirements go into effect **January 2, 2017**
- A few requirements are delayed until **January 2, 2018**



What is a pesticide?

- Any substance or mixture of substances **intended for:**

- preventing,
- destroying,
- repelling, or
- mitigating

any pest



- Or**, any plant regulator, defoliant or desiccant.
- Does not include fertilizers or nutrients**



What are pesticides?

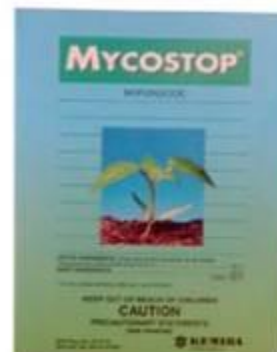
- Insecticides
- Botanicals
- Biological controls
- Deer and rabbit repellents





What are pesticides?

- Disinfectants & bleaches
- Herbicides
- Rat & mouse baits
- Fungicides





Organic Materials Review Institute (OMRI) Categories That Are Pesticides

- Acetic Acid
- Animal Repellents
- Bacillus Thuringiensis
- Beauveria Bassiana
- Biological Controls
- Boric Acid
- Botanical Pesticides
- Calcium Polysulfide
- Chlorine Dioxide
- Chlorine Materials
- Compost Tea?
- Copper Products
- Corn Gluten
- Cytokinins
- D-limonene
- Diatomaceous Earth
- Disinfectants
- Ferric Phosphate
- Nonsynthetic Fungicides
- Garlic
- Gibberellic Acid
- Nonsynthetic Herbicides
- Hydrogen Peroxide
- Inoculants



OMRI Categories That Are Pesticides

- Lime Sulfur
- Microbial Products
- Mined Minerals (Surround)
- Neem Extract & Oils
- Nonsynthetic Nematicides
- Narrow Range Oils
- Nonsynthetic Oils
- Peracetic Acid
- Pheromones
- Plant Extracts
- Potassium Bicarbonate
- Pseudomonas
- Pyrethrum
- Sanitizers
- Seed Treatments
- Soap
- Sodium Carbonate
- Spinosad
- Streptomycin Sulphate
- Sulfur
- Tetracycline
- Trichoderma
- Virus Sprays
- Yucca



Some “Organic” Pesticide Examples

- Trilogy: Neem Oil, 4 hour REI
- Javelin: Btk, 4 hour REI, **dust/mist filtering respirator for applicators**
- DES-X: insecticidal soap, 12 hour REI, eyewear, coveralls, chem-resist footwear and gloves
- Champion: copper hydroxide, 48 hour REI, **eyewear required**





Scope and Applicability

- The USDA National List of allowed pesticides for organic growers includes many EPA registered pesticides that include WPS labeling and compliance with the WPS requirements.



Scope and Applicability

- Keys to WPS applicability:
 - Use of a WPS-labeled pesticide product on an “agricultural establishment” directly related to the production of an “agricultural plant”

Scope and Applicability

WPS requirements are incorporated onto pesticide labeling of agricultural use products by WPS reference statement contained in the “Agricultural Use Requirements” box





Find this statement on the label:

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 4 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
- Socks and chemical-resistant footwear



Scope and Applicability

- Statement found on pesticide labels with crop uses:
 - Restricted-use pesticides
 - General-use pesticides
 - Pesticides for organic production





Scope and Applicability

- Keys to WPS applicability:
 - Use of a WPS-labeled pesticide product on an “agricultural establishment” directly related to the production of an “agricultural plant”
 - **Employment of workers or handlers**
 - Even farm owners that don’t employ workers or handlers have WPS responsibilities applicable to owners and their immediate family



Scope and Applicability

Who is responsible for providing the protections?

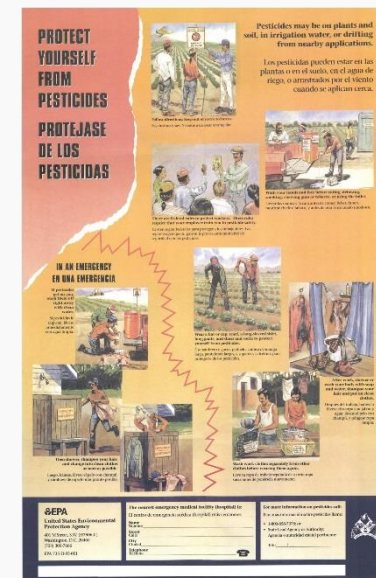
- Agricultural employers on crop-producing establishments

Who is protected?

- Farmworkers
- Pesticide handlers
- Other persons during pesticide applications

WPS Requirements at a Glance

- Inform
 - Training
 - Pesticide safety information
 - Notification
 - Information exchange



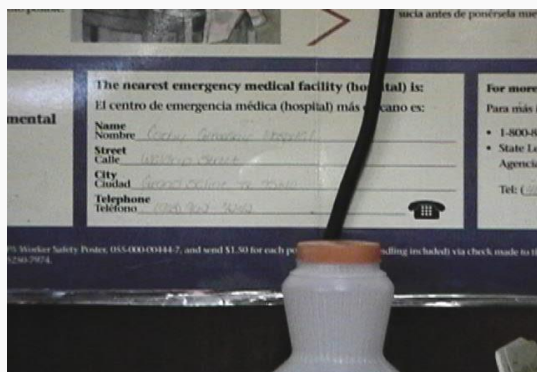
WPS Requirements at a Glance

- Protect
 - Restricted entry intervals (REIs)
 - Personal protective equipment (PPE)
 - Application exclusion zones (AEZs)
 - Suspend applications



WPS Requirements at a Glance

- Mitigate
 - Routine decontamination supplies
 - Emergency eyewash
 - Emergency assistance





Summary of Key WPS Revisions



Pesticide Safety Training

Key Requirements:

- Pesticide training every year
- Expand training content *[Delayed implementation]*
- Require recordkeeping of training for 2 years
 - Provide worker or handler a copy upon request
- No “grace period”
- Keep certified applicators as trainers
- Train-the-trainer programs must be approved by EPA

Notification

Key Requirements:

- Post outdoor treated areas when REI is greater than 48 hours
- Early-entry workers must be provided PPE & oral notification of:
 - information about the pesticide application
 - specific task to be performed
 - amount of time that the worker is allowed to remain in the treated area
 - the PPE required by the label
- No recordkeeping of info provided to early-entry workers





Hazard Communication

Key Requirements:

- Hazard information includes the application-specific information and the pesticide safety data sheets (SDSs)
- Post hazard information at central display for 30 days after REI expires and retain for 2 years
- Access available from display period through retention to:
 - Employee (upon oral or written request)
 - Treating medical personnel and persons working under their supervision (oral or written request)
 - Designated representative (written request only)



Pesticide Safety Information

Key Requirements:

- Safety information displayed at central location and certain decontamination sites
- Additional information required on display *[Delayed implementation]*





Minimum Age for Handlers and Early-Entry Workers

Key Requirements:

- Requires a minimum age of 18 for pesticide handlers and early entry workers (who enter field during restricted-entry interval (REI))
 - Members of owner's immediate family are exempt from this requirement
 - No minimum age in WPS for workers entering field after REI expires



Some “Organic” Pesticide Examples

- Trilogy: Neem Oil, 4 hour REI
- Javelin: Btk, 4 hour REI, **dust/mist filtering respirator for applicators**
- DES-X: insecticidal soap, 12 hour REI, eyewear, coveralls, chem-resist footwear and gloves
- Champion: copper hydroxide, 48 hour REI, **eyewear required**





Respirator Requirements

Key Requirements:

- Adopts by reference a subset of OSHA's standard for respirators
- When a respirator is required by the labeling, handler employer must provide handlers with the following before the handler performs any activity requiring the respirator:
 - Medical evaluation
 - Fit test
 - Respirator training
- Handler employer must maintain records for 2 years documenting completion of these



Decontamination Supplies

Key Requirements:

- If handler is mixing/loading a product that requires eye protection, eyeflush water must be immediately available at the mix/load site for handler eye flushing
- If applicator is using a product that requires eye protection, one pint of water must be immediately available to each applicator





Emergency Assistance

Key Requirements:

- Employer must provide prompt transportation to emergency medical treatment facility in case of pesticide illness or injury
- Requires employers to provide for each product the SDS and specific information about the product, as well as the circumstances of the application and exposure, to treating medical personnel



Implementation Timeline

Date	Milestone
September 28, 2015	Revised WPS final rule signed and announced.
November 2, 2015	Revised WPS final rule published in the <i>Federal Register</i> .
January 1, 2016	Revised WPS final rule becomes effective. [Compliance is required with <u>existing</u> WPS during 2016.]
January 2, 2017	Compliance is required with <u>most</u> of the <u>revised</u> WPS requirements.
January 1, 2018	Compliance is required with <u>all</u> of the <u>revised</u> WPS requirements. Last three requirements: <ul style="list-style-type: none">• Cover new content in worker and handler training• Include new content on pesticide safety information display• Handlers suspend applications if anyone is in the application exclusion zone.



Questions?

- Richard Pont
 - pont.richard@epa.gov
 - 703-305-6448
- Web site: <http://www2.epa.gov/pesticide-worker-safety>



Additional Examples of “Organic” Pesticide Product Labels and Their Associated PPE Requirements



STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep this product in a tightly closed container when not in use. Store in a cool, dry (preferably locked) area. Post as a pesticide storage area. Always store pesticides in the original container. Store away from food, feed, seed, fertilizers, and veterinary supplies. Place formulations on lower shelves and dry formulations above.

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

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of barrier laminate, nitrile or neoprene rubber or viton. If you want more options, follow the instructions for category I on an EPA chemical resistance category selection chart.

Mixers, loaders, applicators, and other handlers must wear the following:

- Long-sleeved shirt
- Long pants
- Shoes and socks
- Chemical-resistant gloves

In addition to the above PPE, application using hand held loggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH approved respirator with:

- A dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or
- A canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14C), or
- A cartridge or canister with any R, P, or HE filter.

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.

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

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 pesticide is highly toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift from treated areas may be hazardous to organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters.

KEEP OUT OF REACH OF CHILDREN

CAUTION PRECAUCIÓN

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.)

FIRST AID

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

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 eyes.
- 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.

IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-800-740-6712.

PyGanic®

Crop Protection EC 1.4II

- For use on growing crops
- Provides rapid knockdown and kill of listed plant pests
- Contains pyrethrum – a botanical insecticide derived from chrysanthemums
- Can be used on day of harvest
- Kills more than 100 listed pests



For Organic Production

ACTIVE INGREDIENT:	1.40%
Pyrethrins	
OTHER INGREDIENTS	98.60%
	100.00%



KEEP OUT OF REACH OF CHILDREN

CAUTION

See inside for first aid and precautionary statements.



DIRECTIONS FOR USE

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

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

dispensed and the treated area has been thoroughly ventilated.

Keep unprotected persons out of treated areas until sprays have dried.

Wear protective clothing when using or handling this product to help avoid exposure to eyes and skin. Eye protection, gloves, a long-sleeved shirt and long pants are recommended.

Do not enter or allow others to enter until sprays have dried.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

ADDITIONAL PRECAUTIONS AND RESTRICTIONS

Do not apply this product in a way that will contact workers or other persons, directly or through drift.

Do not make applications during the rain.

Do not wet plants to the point of runoff.

Do not use in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and dust or falling insects.

Do not remain in the treated area. Exit area immediately and remain outside treated area until aerosols, vapors and/or mists have dispersed.

For use in outdoor residential mixing systems (indoor or outdoor).

For indoor use except in greenhouses.

Any requirement specific to your State or Tribe, consult the agency responsible for pesticide regulation.

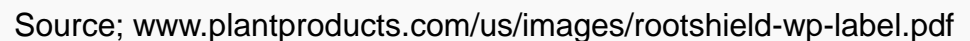
PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Take prudent precautions to avoid contact with eyes.

SKIN: Wear chemical-resistant gloves such as Barrier Laminate, Neoprene Rubber, Nitrile Rubber, or Viton, and wear protective clothing.

RESPIRATORY: Wearing a respirator is not normally required when handling this product. Use in well ventilated areas. Take prudent precautions to avoid breathing vapors and/ or spray mists of this product.

PROTECTIVE CLOTHING: Wear chemical-resistant gloves, shoes and socks, long-pants, and a long-sleeved shirt.





SPECIMEN LABEL

Nu-Cop® 50DF

FUNGICIDE/BACTERICIDE

ACTIVE INGREDIENT:		
Cupric Hydroxide*	77.0%	
INERT INGREDIENTS:	23.0%	
TOTAL	100.0%	

(*Metallic Copper Equivalent.....50%)
*CAS No. 20427-89-2

KEEP OUT OF REACH OF CHILDREN

ANGER PELIGRO

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).

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 INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

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.
- NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate use of gastric lavage.

PRECAUTIONARY STATEMENTS

ANGER

Hazards To Humans And Domestic Animals

Corrosive. Causes irreversible eye damage. May cause skin sensitization reactions in certain individuals. Do not get in eyes or on clothing. Harmful if swallowed or absorbed through the skin. Avoid contact with skin.

EMERGENCY TELEPHONE NUMBERS:

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact:

- (800) 424-9300 CHEMTREC (transportation and spills)
- (800) 900-4044 Poison Control Center (human health)
- (800) 345-4735 ASPCA (animal health)

EPA Reg. No. 45002-4
AD112901

Manufactured For :
ALBAUGH INC.
121 NE 18th Street
Ankeny, Iowa 50021

EPA Est. No. 45002-MEX-02
PRODUCT OF MEXICO



PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are any waterproof material. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride,
3. Shoes plus socks
4. Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 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 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 contaminated equipment. Only protected handlers may be in the area during application. For any requirements specific to your State, 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 circumstances and equipment that must be used when handling pesticides. (PPE) and restricted-entry intervals. 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 without required PPE. The following equipment and precautions must be followed for 7 days following the application of the product. An eye flush container, designed specifically for flushing eyes, must be available at the WPS decontamination site for workers entering the area treated with copper hydroxide. Notify worker of the application by warning them orally that residues in the treated area may be irritating to their eyes and to take precautions such as refraining from rubbing their eyes and if they get residues in their eyes, they should immediately flush eyes using the eye flush container.

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:

1. Coveralls
2. Chemical-resistant gloves made of any waterproof material
3. Shoes plus socks
4. Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box 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.

Do not enter treated areas without protective clothing until sprays have dried.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, secure, dry area in original container.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. 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: Completely empty bag into application equipment. 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.

GENERAL INSTRUCTIONS

Nu-Cop 50DF may be applied by Air, or by Dilute or Concentrated Ground Sprayers, or Chemigation on crops and at rates given on this label unless specifically prohibited for that crop use. When selecting a use rate for Nu-Cop 50DF, do not apply less than the label recommended minimum amount. Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. Use the higher rates for large mature tree crops. The per acre use rate is applicable for

SPECIMEN LABEL



Broad Spectrum Bactericide/Fungicide

For Use on Crops, Turf and Ornamentals

Active Ingredients:

Mono- and di-potassium salts of phosphorus acid* 27.1%

*contains 17.7% phosphorus acid by wt.

Hydrogen Peroxide 14.0%

Other Ingredients 58.9%

Total 100.0%

*Contains 2.96 pounds/gallon of mono- and di-potassium salts of phosphorous acid, equivalent to 1.93 pounds of phosphorous acid per gallon.

KEEP OUT OF REACH OF CHILDREN
DANGER

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

FIRST AID

If on skin or clothing	<ul style="list-style-type: none"> 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.
If in eyes	<ul style="list-style-type: none"> 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 Swallowed	<ul style="list-style-type: none"> Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call 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. You may also contact 1-800-222-1222 for emergency medical treatment information.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

EPA Registration No. 70299-22

EPA Establishment No. 067441-IL-001

Sold by: BioSafe Systems, LLC 22 Meadow Street, East Hartford, CT 06108 1.888.273.3088 (toll-free)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. Causes skin burns. Causes irreversible eye damage. Harmful if swallowed. Harmful if inhaled. Avoid breathing vapor or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Handlers who may be exposed to the undiluted product through mixing, loading, application, or other tasks must wear: coveralls over long-sleeved shirt and long pants, rubber gloves, chemical resistant footwear plus socks, and protective eyewear (goggles or face shield). Handlers who may be exposed to the dilute through application or other tasks must wear: long-sleeved shirt and long pants, and shoes plus socks. Follow manufacturer's instructions for cleaning / maintaining PPE. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.



OxiPhos®

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: OxiPhos®
Bactericide/Fungicide

Form: Liquid
Company: BioSafe Systems, LLC
Address: 22 Meadow Street, East Hartford, CT 06108
Phone: 1.888.273.3088
Fax: 860.424.9300
Email: info@biosafe.com
Date: 07.2013

2. HAZARD IDENTIFICATION

Potassium Salts of Phosphorus
1 lb. of Phosphorus Acid CAS# 13598-36-2
oxide: CAS# 7722-84-1 14%
oxide: CAS# 7722-84-1 14%

3. COMPOSITION

oxide: CAS# 7722-84-1 14%

4. IDENTIFICATION

Classification: Oxidizer
Hazard: Corrosive
Hazard: Irritant
Hazard: Harmful
Hazard: Toxic
Hazard: Very Toxic
Hazard: Extremely Toxic

Statements: Health effects to over
concentrate. Corrosive to mucous
eyes and skin. The seriousness of the
prognosis of intoxication depends
on concentration and duration of exposure.
USE TEMPORARY skin discoloration and
use severe eye damage

IRRMF OR FATAL: Causes chemical burns
throat and stomach. Corrosive to
all tract. May cause blindness and cyanosis
excessive fluid in the mouth and nose,
itching, nausea and vomiting. Risk of
bronchitis and pulmonary edema.
apors or may cause irritation. People
or other lung problems may be more

MEASURES
Recommendations:
product splashing in eyes, treat eyes first.
1 clothing in water Contact physician in all

lately flush with plenty of cool running
re contact lenses. Continue flushing for at
least 15 minutes. Administer analgesic eye
drops. Call a physician immediately.
lately flush skin with plenty of cool
water for at least 15 minutes while removing
1 clothing and shoes. Wash clothing before

use mouth at once: drink 1 or 2 large
water or milk. DO NOT induce vomiting.
anything by mouth to an unconscious
person to the hospital.
immediately move a person to fresh air.

5. FIRE FIGHTING MEASURES
Special fire hazards: Product (concentrate) can
decompose and will release oxygen thereby adding to
the fire hazard.
Fire fighting methods: Product is not flammable and
can be quickly diluted with clean water. Oxidizing Agent
may cause spontaneous ignition with oxidizing agents.

6. ACCIDENTAL RELEASE MEASURES
Cleanup: Rinse small amounts to drain when possible.
Dike or dam large spills, pump to containers or soak in
inert absorbent. Push residue to sanitary sewer, rinse
area thoroughly with clean water. Avoid materials that
are incompatible with concentrate.
Waste Disposal: Consult state and local authorities for
restrictions on disposal of chemical wastes. Unused
product (concentrate) is classified as a (D002) by RCRA
criteria.

7. HANDLING AND STORAGE
Never return product back to the original container.
Keep concentrate away from reactive substances.
Prevent contact with organic materials. Keep product in
original container. Store in cool, ventilated area. Keep
out of direct sunlight. Never use metal containers or
spigots. Use vented container. Warn personnel of
dangers of concentrated product

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Respiratory: Avoid breathing mists or vapors of
concentrate.
Eyes: Use chemical splash goggles when handling
concentrate. For continued severe exposure, wear a
face shield over the goggles.
Skin: To avoid contact with skin, wear long pants, long-
sleeved shirt, socks, shoes and chemical resistant
gloves. An emergency shower or water supply should
be readily accessible to the work area.
Hydrogen Peroxide:
ACGIH TLV: 1 PPM 8 HOUR TWA 1.4 mg/m³ TWA
OSHA PEL: 1 PPM 8 HOUR TWA 1.4 mg/m³ TWA
Mono and Dipotassium phosphites: Not established
Respiratory Protection:
NIOSH approved full-face respirator for excessive
conditions
Hand gloves for handling concentrate = butyl rubber
Eye protection - chemical proof goggles/face shield for
splash risk
Skin protection coveralls when handling concentrate

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance: Clear, colorless liquid
Odor: No distinct odor
Freezing Point: Not determined
Boiling Point: Not determined
pH: 4.5
Specific Gravity: 1.35
Solubility: Soluble
Decomposition Temperature: Self-accelerating
decomposition temperature >55°C (>131°F)

10. STABILITY AND REACTIVITY
Chemical Stability: Stable under normal handling and
storage conditions, with slow oxygen release.
Conditions to avoid: Excessive heat/direct sunlight. Do
not store near heat or flame
Incompatible Materials: acids, bases, reducing agents,
organic materials, metals, salts of metals.

11. TOXICOLOGICAL INFORMATION
No data available

12. ECOLOGICAL INFORMATION
No data available

13. DISPOSAL CONSIDERATIONS
Store in original containers in a cool, well-ventilated area,
away from direct sunlight. Do not allow product to
become overheated in storage. This may cause
increased degradation of the product, which will
decrease product effectiveness. In case of spill, flood
area with large quantities of water. Do not store in a
manner where cross-contamination with other
pesticides or fertilizers could occur. Wastes resulting
from the use of this product may be disposed of on site
or at an approved waste disposal facility. Open
dumping is prohibited. If wastes cannot be disposed of
according to label directions, contact your State
Pesticide or Environmental Control Agency, or the
Hazardous Waste Representative at the nearest EPA
Regional Office for guidance.

14. TRANSPORT INFORMATION
DOT Shipping Name: Hydrogen Peroxide, Aqueous
Solutions UN Number: 2804
Hazard Class: 5.1
Primary Hazard Label: Oxidizer
Packing Group: III
Shipping Container: UN Certified vented polyethylene,
2.5, 5, 10, 30, 55 and 275 gallon polyethylene drums

15. REGULATORY INFORMATION
Not determined

16. OTHER INFORMATION
To the extent of our knowledge, the information herein
is accurate as of the date of this document. However,
neither BioSafe Systems nor any of its affiliates make
any warranty, expressed or implied, or accept any
liability in connection with the information or its use.
The information is for use by technically skilled persons
at their own discretion and risk. This is not a license or a
patent. The user alone must finally determine suitability
of any information or material for any contemplated use,
the manner or use and whether any patents are
infringed.

BioSafe Systems

East Hartford, CT 06108

For additional information on OxiPhos®, call us toll-free

at 1.888.273.3088

©2013 Copyright BioSafe Systems, LLC. OxiPhos® is a
registered trademark of BioSafe Systems, LLC. Always
read and follow label directions. (1)900412



Spray Oil Emulsion Fungicide, Insecticide and Miticide

TriTek™

OMRI
LISTED

See inside booklet for
complete Precautionary
Statements and
Directions For Use.
EPA Reg. No. 48813-1
EPA Est. No. 48813-IL-1

CAUTION: KEEP OUT OF REACH OF CHILDREN

2011-02

NET CONTENTS: 2.5 GAL. (9.46 L)

Active Ingredient
Mineral Oil* 80.0%
Other Ingredients 20.0%
Total 100.0%
*Contains petroleum distillates
Unsulfonated Residue of Mineral Oil 92.0%

Manufactured By:
Brandt Consolidated, Inc.
2935 South Koke Mill Road
Springfield, Illinois 62711 USA
www.brandt.co
800.300.6559

FOR ORGANIC PRODUCTION

BRANDT

Spray Oil Emulsion Fungicide, Insecticide and Miticide

TriTek™

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

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

FIRST AID

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.

IF SWALLOWED: Immediately call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give ANY liquid to the person. Do not give anything by mouth to an unconscious person.

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 INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticide Information Center at 1-800-858-7378 for emergency medical treatment information.

NOTE TO PHYSICIAN: Contains petroleum distillate. Do not induce vomiting since vomiting may pose aspiration pneumonia hazard.

See attached booklet for complete Precautionary Statements and Directions For Use.

BRANDT

Manufactured By:
Brandt Consolidated, Inc.
2935 South Koke Mill Road
Springfield, Illinois 62711 USA
www.brandt.co
800.300.6559

Active Ingredient

Mineral Oil*	80.0%
Other Ingredients	20.0%
Total	100.0%

*Contains petroleum distillates
Unsulfonated Residue of Mineral Oil 92.0%
EPA Reg. No. 48813-1 EPA Est. No. 48813-IL-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry, locked area out of the reach of children. Keep container tightly closed in storage to prevent entry of water.

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

CONTAINER HANDLING/DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/2 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Net Contents:
2.5 Gal. per bottle (9.46 L)

2011-02

Brandt Lime Sulfur

Fungicide

Not for residential use or application to residential sites. This product may not be used in, on, or around any structure, vehicle, article, surface or area associated with the household, including non-agricultural outbuildings, non-commercial greenhouses, pleasure boats and recreational vehicles; in or around any preschool or day care facility or on humans or pets.



ACTIVE INGREDIENT:	29.0%
Calcium polysulfide	71.0%
OTHER INGREDIENTS:	100.0%
TOTAL:	31*

Density: Baume at 60°F 10.6
Lbs Per Gallon at 68°F 10.6

Contains Calcium and Sulfur expressed as Gypsum - 3.0 lbs. per gallon. Other combined Sulfur 1.9 lbs. per gallon.

EPA Reg. No. 61842-30-48813

EPA Est. No. 48498-CA-1

KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

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.)

FIRST AID

IF SWALLOWED: Call a Poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the Poison Control Center or doctor. Do not get anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a Poison Control Center or doctor for further treatment advice.

IF IN EYES: Hold eyes 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 Poison Control Center or doctor for treatment advice.

HOT LINE NUMBER: Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. You may also contact 1-866-374-1975 for emergency medical treatment information.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Fatal if swallowed. Fatal if absorbed through the skin. Fatal if inhaled. Corrosive. Causes irreversible eye damage. Causes skin burns. Do not get in eyes, on skin, or on clothing. Do not breathe vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. This product is corrosive to flesh because of its caustic alkaline nature.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:

Coveralls over long-sleeved shirt and long pants,
Chemical-resistant gloves,

Chemical-resistant footwear plus socks,
Goggles or face shield,

Chemical-resistant headgear for overhead exposure,
Chemical-resistant apron when mixing, loading or cleaning equipment or spills,
A NIOSH approved respirator with an organic-vapor removing cartridge with a A NIOSH approved for pesticides (MSHA/NIOSH approval number prefix TC-23C),
prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

For exposures in enclosed areas a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) must be used.

For exposures outdoors, a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) must be used.

Discard clothing and other absorbent material that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

If farm workers are unable to read, they must be given oral warnings and it must be assured that they understand label precautions and first-aid treatments. Warnings must be given in appropriate language if workers do not understand English. Oral warnings should be given to inform workers of areas or fields which should not be entered without protective clothing, the amount of time the area or field should be vacated and first-aid actions to take in case of accidental exposure.

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 pesticide is toxic to fish. Drift may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix BRANDT LIME SULFUR with acids or phosphate fertilizer products. Deadly and potentially extremely flammable hydrogen sulfide gas may be emitted.

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.

BRANDT LIME SULFUR - 2013-10 - Page 1 of 4



Page 1 of 7

Safety Data Sheet Lime Sulfur Solution

Sulfur, EPA Reg. No. 61842-30-48813

alt solution

2566-47-0000

al Industry, Pesticide - Fungicide

onsolidated, Inc.
Jth Koke Mill Road
ld, IL 62711
7-5800

Consolidated, Inc. (559) 994-9144
TREC (800) 424-9300 (Domestic)
(703) 527-3887 (International)

OMRI Listed®

The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program Rule.

Product
Brandt Lime Sulfur

Company
Brandt Consolidated, Inc.
Vatren Jurin
2935 South Koke Mill Rd
Springfield, IL 62711

Category
NOP: Calcium Polysulfide

Issue Date
11-Nov-13

Class
est, Weed, and Disease Control

Expiration Date
01-Mar-2015

Only if the requirements of 205.206(e) are met.

th	Acute Oral toxicity	Category 4
	Acute Dermal toxicity	Category 4
	Acute Inhalation toxicity	Category 4
	Skin corrosion/irritation	Category 2
	Eye damage/irritation	Category 2B

ysical None
Vaming

Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes skin irritation
Causes eye irritation



Wash thoroughly with soap and water after handling.
If swallowed, get medical attention/contact Poison Control Center immediately.
Wear protective gloves/protective clothing when handling product.
If contact with the skin: Was immediately with water for 15 minutes.

Brandt Lime Sulfur

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org



SPECIMEN LABEL

Contans® WG



BIOLOGICAL FUNGICIDE

For agricultural use to reduce/control
Sclerotinia sclerotiorum and *Sclerotinia minor* in the soil

ACTIVE INGREDIENT:	
Contans® WG strain CON/W/9108	5.30%
OTHER INGREDIENTS:	94.70%
TOTAL:	100.00%

Contains a minimum of 1×10^8 chn/gram

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

If swallowed	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none">• Remove contaminated clothing.• Rinse skin immediately with plenty of water for 15 - 20 minutes.• Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.• 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.

Manufactured by:
PROPHYTA Biologischer Pflanzenschutz GmbH
Inselstrasse 12
D-22999 Malchow/Poel, Germany

EPA Reg. No.
72444-1

EPA Est. No.
72444-001-001

OMRI
LISTED

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: CAUTION. Harmful if swallowed, if absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. 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 and shoes plus socks. All mixer/loaders and applicators must wear a dust/mist-filtering respirator (MSHA/NIOSH approval number prefix TC- 21C), or a NIOSH approved respirator with any N,P,R, or HE filter. 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. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 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.



Broad Spectrum Insecticide and Miticide

Ecotec®

**KEEP OUT
OF REACH OF
CHILDREN
CAUTION**

Active Ingredients
Rosemary Oil 10.0%
Peppermint Oil 2.0%
Other Ingredients* 88.0%
Total 100.0%

* Isopropyl myristate, Isopropyl alcohol, Polyglyceryl oleate, Butyl lactate and Vanillin.

This product has not been registered by the United States Environmental Protection Agency. Brandt Consolidated, Inc. represents that it is exempt from registration under the Federal Insecticide, Fungicide and Rodenticide Act [FIFRA § 25(b)] as a minimum risk pesticide.

OMRI
Listed

NET CONTENTS: 2.5 GALLONS (9.46 L)

2012-07

BRANDT

Manufactured for:
Brandt Consolidated, Inc.
2935 South Koke Mill Road
Springfield, Illinois 62711 USA

OMRI Listed
25b - no EPA Registration
Not WPS-labeled

Active Ingredients
Rosemary Oil 10.0%
Peppermint Oil 2.0%
Other Ingredients* 88.0%

Total 100.0%

* Isopropyl myristate, Isopropyl alcohol, Polyglyceryl oleate, Butyl lactate and Vanillin.