SAFETY DATA SHEET



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SCOURGE® INSECTICIDE WITH RESMETHRIN / PIPERONYL BUTOXIDE 4% + 12% MF FORMULA II

Version 3.0 / USA Revision Date: 07/29/2015 102000004837 Print Date: 08/11/2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

SCOURGE® INSECTICIDE WITH RESMETHRIN / PIPERONYL **Trade name**

BUTOXIDE 4% + 12% MF FORMULA II

Product code (UVP) 05952158

SDS Number 102000004837

EPA Registration No. 432-716

Relevant identified uses of the substance or mixture and uses advised against

Use Insecticide

Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer Environmental Science

2 T.W. Alexander Drive

Research Triangle PK, NC 27709

United States

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone

Number (24hr/ 7 days)

1-800-334-7577

Product Information Telephone Number

1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Carcinogenicity: Category 2



Signal word: Warning

Hazard statements

Suspected of causing cancer.

Precautionary statements

Obtain special instructions before use.

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Do not handle until all safety precautions have been read and understood. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF exposed or concerned: Get medical advice/ attention. Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No. | Concentration % by weight |
|--|------------|---------------------------|
| Piperonyl butoxide | 51-03-6 | 12.42 |
| Resmethrin | 10453-86-8 | 4.14 |
| Distillates (petroleum), hydrotreated light paraffinic | 64742-55-8 | 77.7 |
| Solvent Naphtha (petroleum), heavy aromatic | 64742-94-5 | 5.0 |
| Naphthalene | 91-20-3 | 0.57 |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when

calling a poison control center or doctor or going for treatment.

Inhalation Move 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 physician or poison control center immediately.

Skin contact Take off contaminated clothing and shoes immediately. Wash off

immediately with plenty of water for at least 15 minutes. Call a physician

or poison control center immediately.

Eye contact 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 physician or poison control center

immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth

and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim

unattended.

Most important symptoms and effects, both acute and delayed

Symptoms The following symptoms may occur:, Headache, Nausea, Diarrhoea,

Drowsiness, Vomiting

Indication of any immediate medical attention and special treatment needed

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Risks Contains hydrocarbon solvents. May pose an aspiration pneumonia

hazard. This product contains a pyrethroid. Pyrethroid poisoning should

not be confused with carbamate or organophosphate poisoning.

Treatment Appropriate supportive and symptomatic treatment as indicated by the

patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Carbon dioxide (CO2), Dry chemical, Foam, Water

Unsuitable None known.

Special hazards arising

from the substance or

mixture

Advice for firefighters

Special protective

equipment for fire-fighters

Firefighters should wear NIOSH approved self-contained breathing

apparatus and full protective clothing.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed

containers exposed to fire with water spray. Do not allow run-off from

fire fighting to enter drains or water courses.

Dangerous gases are evolved in the event of a fire.

Flash point > 93.4 °C

Autoignition temperature no data available Lower explosion limit no data available **Upper explosion limit** no data available **Explosivity** not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact

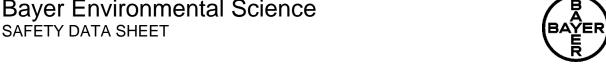
with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, Methods for cleaning up

universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. Do not allow to enter soil,



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waterways or waste water canal.

Reference to other sections Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

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Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage. Use only

in area provided with appropriate exhaust ventilation.

Wash hands thoroughly with soap and water after handling and before **Hygiene measures**

eating, drinking, chewing gum, using tobacco, using the toilet or

applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after

handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before

using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and

feed. Store in original container and out of the reach of children,

preferably in a locked storage area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|--|------------|--------------------|---------|----------|
| Piperonyl butoxide | 51-03-6 | 500 ppm (TWA) | | OES BCS* |
| Resmethrin | 10453-86-8 | 6.1 mg/m3 (TWA) | | OES BCS* |
| Distillates (petroleum), hydrotreated light paraffinic (Inhalable fraction.) | 64742-55-8 | 5 mg/m3 (TWA) | 03 2014 | ACGIH |
| Distillates (petroleum), hydrotreated light paraffinic (Mist.) | 64742-55-8 | 5 mg/m3 (REL) | 2010 | NIOSH |
| Distillates (petroleum), hydrotreated light paraffinic (Mist.) | 64742-55-8 | 10 mg/m3 (STEL) | 2010 | NIOSH |
| Distillates (petroleum), hydrotreated light paraffinic (Mist.) | 64742-55-8 | 5 mg/m3 (PEL) | 02 2006 | OSHA Z1 |

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| Distillates (petroleum), hydrotreated light paraffinic (Mist.) | 64742-55-8 | 5 mg/m3 (TWA) | 1989 | OSHA Z1A |
|--|------------|----------------------------------|---------|-----------|
| Distillates (petroleum), hydrotreated light paraffinic (Mist.) | 64742-55-8 | 5 mg/m3 (TWA) | 06 2008 | TN OEL |
| Distillates (petroleum), hydrotreated light paraffinic | 64742-55-8 | 1000ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Distillates (petroleum), hydrotreated light paraffinic | 64742-55-8 | 100ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Distillates (petroleum), hydrotreated light paraffinic (Mist.) | 64742-55-8 | 5 mg/m3 (TWA PEL) | 08 2010 | US CA OEL |
| Solvent Naphtha (petroleum), heavy aromatic | 64742-94-5 | 2560ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Solvent Naphtha (petroleum), heavy aromatic | 64742-94-5 | 460ppb (ST ESL) | 07 2011 | TX ESL |
| Solvent Naphtha (petroleum), heavy aromatic | 64742-94-5 | 256ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Solvent Naphtha (petroleum), heavy aromatic | 64742-94-5 | 46ppb (AN ESL) | 07 2011 | TX ESL |
| Solvent Naphtha (petroleum), heavy aromatic | 64742-94-5 | 1,600 mg/m3/400 ppm (TWA PEL) | 08 2010 | US CA OEL |
| Naphthalene | 91-20-3 | 10 ppm (TWA) | 02 2012 | ACGIH |
| Naphthalene | 91-20-3 | 50 mg/m3/10 ppm (REL) | 2010 | NIOSH |
| Naphthalene | 91-20-3 | 75 mg/m3/15 ppm (STEL) | 2010 | NIOSH |
| Naphthalene | 91-20-3 | 50 mg/m3/10 ppm (PEL) | 02 2006 | OSHA Z1 |
| Naphthalene | 91-20-3 | 75 mg/m3/15 ppm (STEL) | 1989 | OSHA Z1A |
| Naphthalene | 91-20-3 | 50 mg/m3/10 ppm (TWA) | 1989 | OSHA Z1A |
| Naphthalene | 91-20-3 | 50 mg/m3/10 ppm (TWA) | 06 2008 | TN OEL |
| Naphthalene | 91-20-3 | 75 mg/m3/15 ppm (STEL) | 06 2008 | TN OEL |
| Naphthalene | 91-20-3 | 50ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Naphthalene | 91-20-3 | 200ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Naphthalene | 91-20-3 | 38ppb (ST ESL) | 02 2013 | TX ESL |
| Naphthalene | 91-20-3 | 10ppb (AN ESL) | 07 2011 | TX ESL |

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| Naphthalene | 91-20-3 | 0.5 mg/m3/0.1 ppm (TWA PEL) | 10 2014 | US CA OEL |
|-------------|---------|--------------------------------|---------|-----------|
| Naphthalene | 91-20-3 | 10 ppm (TWA) | | OES BCS* |

^{*}OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection When respirators are required, select NIOSH approved equipment

based on actual or potential airborne concentrations and in

accordance with the appropriate regulatory standards and/or industry

recommendations.

Hand protection Chemical resistant nitrile rubber gloves

Eye protection Safety glasses with side-shields

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures Follow manufacturer's instructions for cleaning/maintaining PPE. If

no such instructions for washables, use detergent and warm/tepid

water.

Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance yellow to brown

Physical State Liquid

Odor mild solvent-like
Odour Threshold no data available
pH no data available
Vapor Pressure no data available
Vapor Density (Air = 1) no data available

Density ca. 0.87 g/cm³ at 20 °C

Evapouration rate no data available

Boiling Point no data available

Melting / Freezing Point no data available

Water solubility insoluble

Minimum Ignition Energy not applicable

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Decomposition

no data available

temperature

Partition coefficient: n-

octanol/water

not applicable

Viscosity 34.3 mPa.s at 21 °C

Flash point

> 93.4 °C no data available

Autoignition temperature Lower explosion limit

no data available

Upper explosion limit

no data available

Explosivity not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition no data available

Chemical stability Stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials Strong reducing agents, Strong oxidizing agents

Hazardous decomposition

products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Ingestion, Skin Absorption, Eye contact, Inhalation

Immediate Effects

Eye Moderate eye irritation.

Skin May cause slight irritation. Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity LD50 (rat) > 2,700 mg/kg

Acute inhalation toxicity LC50 (male/female combined rat) > 2.6 mg/l

Exposure time: 4 h

Determined in the form of liquid aerosol.

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Highest attainable concentration.

No deaths

Acute dermal toxicity LD50 (rabbit) > 2,000 mg/kg

Skin irritation Slight irritation (rabbit)

Eye irritationMinimally irritating. (rabbit)SensitisationNon-sensitizing. (guinea pig)

Assessment repeated dose toxicity

Piperonyl butoxide did not cause specific target organ toxicity in experimental animal studies. Resmethrin did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Piperonyl butoxide was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Resmethrin was not genotoxic in a battery of in vitro tests.

Assessment carcinogenicity

Piperonyl butoxide was not carcinogenic in lifetime feeding studies in rats and mice. Resmethrin was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

| Distillates (petroleum), hydrotreated light paraffinic Naphthalene | 64742-55-8 91-20-3 | Group A4 Group A3 |
|---|-----------------------|--|
| NTP | | |
| Distillates (petroleum), hydrotreated light paraffinic | 64742-55-8 | 1980 |
| Naphthalene | 91-20-3 | |
| IARC | | |
| Piperonyl butoxide Distillates (petroleum), hydrotreated light paraffinic | 51-03-6 64742-55-8 | Overall evaluation: 3 Overall evaluation: 3 |
| Distillates (petroleum), hydrotreated light paraffinic | 64742-55-8 | Overall evaluation: 1 |
| Naphthalene | 91-20-3 | Overall evaluation: 2B |

OSHA

None.

Assessment toxicity to reproduction

Piperonyl butoxide did not cause reproductive toxicity in a two-generation study in rats. Resmethrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals.

Assessment developmental toxicity

Piperonyl butoxide did not cause developmental toxicity in rats and rabbits.

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Resmethrin caused developmental toxicity only at dose levels toxic to the dams.

Further information

Acute toxicity studies have been bridged from a similar formulation(s). The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Biodegradability Piperonyl butoxide:

not rapidly biodegradable

Resmethrin:

not rapidly biodegradable

Koc Piperonyl butoxide: Koc: 399 - 830

Resmethrin: Koc: 100000

Bioaccumulation Piperonyl butoxide:

Potential bioaccumulation

Resmethrin: Bioconcentration factor (BCF) 68

Does not bioaccumulate.

Mobility in soil Piperonyl butoxide: Moderately mobile in soils

Resmethrin: Immobile in soil

Environmental precautions Do not allow to get into surface water, drains and ground water.

Drift and runoff from treated areas may be hazardous to aquatic

organisms in adjacent sites.

Do not contaminate surface or ground water by cleaning equipment or

disposal of wastes, including equipment wash water.

Do not apply this product or allow it to drift to blooming crops or weeds if

bees are visiting the treatment area.

Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Pesticide, spray mixture or rinse water that cannot be used according to

label instructions may be disposed of on site or at an approved waste

disposal facility.

Dispose in accordance with all local, state/provincial and federal

regulations.

Contaminated packaging Do not re-use empty containers.

Triple rinse containers.

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Puncture container to avoid re-use.

Dispose of empty container in a sanitary landfill or by incineration, or, if

allowed by State/Provincial and local authorities, by burning.

If burned, stay out of smoke.

Follow advice on product label and/or leaflet.

RCRA Information Characterization and proper disposal of this material as a special or

hazardous waste is dependent upon Federal. State and local laws and

are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR

UN number 3082 Class 9 Packaging group III

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID,

N.O.S.

(NAPHTHALENE)

RQ Reportable Quantity is reached with 17,543 lb of product.

IMDG

UN number 3082
Class 9
Packaging group III
Marine pollutant YES

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(RESMETHRIN SOLUTION)

IATA

UN number 3082
Class 9
Packaging group III
Environm. Hazardous Mark YES

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(RESMETHRIN SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN

POISON

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SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-716

US Federal Regulations

TSCA list

Piperonyl butoxide 51-03-6 Distillates (petroleum), hydrotreated light 64742-55-8

paraffinic

Solvent Naphtha (petroleum), heavy 64742-94-5

aromatic

Naphthalene 91-20-3

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

 Piperonyl butoxide
 51-03-6
 1.0%

 Resmethrin
 10453-86-8
 1.0%

Naphthalene 91-20-3

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Resmethrin 10453-86-8 Naphthalene 91-20-3

This product contains a chemical known to the State of California to cause birth defects or other

reproductive harm.

Resmethrin 10453-86-8 Developmental toxin.

US State Right-To-Know Ingredients

Piperonyl butoxide 51-03-6 NJ, RI Resmethrin 10453-86-8 NJ, RI Distillates (petroleum), hydrotreated light 64742-55-8 CA, MN

paraffinic

Naphthalene 91-20-3 CA, CT, IL, MN, NJ, RI

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

Naphthalene 91-20-3 100 lbs

Clean Water Section 307 Priority Pollutants

Naphthalene 91-20-3

Safe Drinking Water Act Maximum Contaminant Levels

Naphthalene 91-20-3

EPA/FIFRA Information:

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This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed or absorbed through skin.

Moderate eye irritation.

Avoid contact with skin, eyes and clothing.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
CAS-Nr. Chemical Abstracts Service number

EINECS European inventory of existing commercial substances

ELINCS European list of notified chemical substances

IARC US. IARC Monographs on Occupational Exposures to Chemical Agents

IATA International Air Transport Association
IMDG International Maritime Dangerous Goods

N.O.S. Not otherwise specified

NTP US. National Toxicology Program (NTP) Report on Carcinogens OECD Organization for Economic Co-operation and Development

TDG Transportation of Dangerous Goods

TWA Time weighted average

UN United Nations

WHO World health organisation

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 07/29/2015

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