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

Product identifier
Trade name SCOURGE® INSECTICIDE WITH RESMETHRIN/PIPERONYL BUTOXIDE 18% + 54% MF FORMULA II
Product code (UVP) 05952174
SDS Number 102000004839
EPA Registration No. 432-667

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
Flammable liquids: Category 4
Carcinogenicity: Category 2

Signal word: Warning
Hazard statements
Combustible liquid
Suspected of causing cancer.
Precautionary statements
Keep away from open flames/hot surfaces. - No smoking.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
IF exposed or concerned: Get medical advice/ attention.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piperonyl butoxide</td>
<td>51-03-6</td>
<td>54.0</td>
</tr>
<tr>
<td>Resmethrin</td>
<td>10453-86-8</td>
<td>18.0</td>
</tr>
<tr>
<td>Solvent Naphtha (petroleum), heavy aromatic</td>
<td>64742-94-5</td>
<td>24.8</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>2.8</td>
</tr>
</tbody>
</table>

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

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 spray
Unsuitable None known.

Special hazards arising from the substance or mixture
Dangerous gases are evolved in the event of a fire.

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.

Flash point 74 °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
Avoid contact with spilled product or contaminated surfaces. Isolate hazard area. Keep unauthorized people away. Remove all sources of ignition.

Methods and materials for containment and cleaning up

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, 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, waterways or waste water canal.

Reference to other sections
Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
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.

Advice on protection against fire and explosion
Take measures to prevent the build up of electrostatic charge.

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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piperonyl butoxide</td>
<td>51-03-6</td>
<td>500 ppm (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Resmethrin</td>
<td>10453-86-8</td>
<td>6.1 mg/m3 (TWA)</td>
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<td>OES BCS*</td>
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<tr>
<td>Solvent Naphtha (petroleum), heavy aromatic</td>
<td>64742-94-5</td>
<td>2560ug/m3 (ST ESL)</td>
<td>07 2011</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Solvent Naphtha (petroleum), heavy aromatic</td>
<td>64742-94-5</td>
<td>460ppb (ST ESL)</td>
<td>07 2011</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Solvent Naphtha (petroleum), heavy aromatic</td>
<td>64742-94-5</td>
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<td>07 2011</td>
<td>TX ESL</td>
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<tr>
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<td>46ppb (AN ESL)</td>
<td>07 2011</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Solvent Naphtha (petroleum), heavy aromatic</td>
<td>64742-94-5</td>
<td>1,600 mg/m3/400 ppm (TWA PEL)</td>
<td>08 2010</td>
<td>US CA OEL</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>10 ppm (TWA)</td>
<td>02 2012</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>50 mg/m3/10 ppm (REL)</td>
<td>2010</td>
<td>NIOSH</td>
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<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>75 mg/m3/15 ppm (STEL)</td>
<td>2010</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>50 mg/m3/10 ppm (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
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<td>Naphthalene</td>
<td>91-20-3</td>
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<td>OSHA Z1A</td>
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<td>Naphthalene</td>
<td>91-20-3</td>
<td>50 mg/m3/10 ppm (TWA)</td>
<td>1989</td>
<td>OSHA Z1A</td>
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<td>Naphthalene</td>
<td>91-20-3</td>
<td>50 mg/m3/10 ppm (TWA)</td>
<td>06 2008</td>
<td>TN OEL</td>
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<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>75 mg/m3/15 ppm (STEL)</td>
<td>06 2008</td>
<td>TN OEL</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>50ug/m3 (AN ESL)</td>
<td>07 2011</td>
<td>TX ESL</td>
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<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>200ug/m3 (ST ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
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<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>38ppb (ST ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
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<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>10ppb (AN ESL)</td>
<td>07 2011</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0.5 mg/m3/0.1 ppm (TWA PEL)</td>
<td>10 2014</td>
<td>US CA OEL</td>
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<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>10 ppm</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>
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 beige to brown
Physical State Liquid
Odor mild
Odour Threshold no data available
pH no data available
Vapor Pressure no data available
Vapor Density (Air = 1) no data available
Density ca. 1.00 g/cm³ at 20 °C
Bulk density 8.41 lb/gal
Evaporation rate no data available
Boiling Point no data available
Melting / Freezing Point no data available
Water solubility insoluble
Minimum Ignition Energy not applicable
Decomposition temperature: no data available
Partition coefficient: n-octanol/water: not applicable
Viscosity: 35.6 mPa.s at 21 °C
Flash point: 74 °C
Autoignition temperature: no data available
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: Heat, flames and sparks.
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.
Highest attainable concentration.
No deaths

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

**Skin irritation**
Slight irritation (rabbit)

**Eye irritation**
Minimally irritating. (rabbit)

**Sensitisation**
Non-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**
Naphthalene 91-20-3 Group A3

**NTP**
Naphthalene 91-20-3

**IARC**
Piperonyl butoxide 51-03-6 Overall evaluation: 3
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.
Resmethrin caused developmental toxicity only at dose levels toxic to the dams.

**Further information**
Only acute toxicity studies have been performed on the formulated product.
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.
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.
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
NA-Number 1993
Packaging group III
Proper shipping name COMBUSTIBLE LIQUID, N.O.S.
(PETROLEUM DISTILLATES, NAPHTHALENE)
RQ Reportable Quantity is reached with 3,571 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

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-667
US Federal Regulations

TSCA list
- Piperonyl butoxide: 51-03-6
- Solvent Naphtha (petroleum), heavy aromatic: 64742-94-5
- 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
- Resmethrin: 10453-86-8
- 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
- Resmethrin: 10453-86-8
- Naphthalene: 91-20-3

Canadian Regulations

Canadian Domestic Substance List
None.

Environmental

CERCLA
- Naphthalene: 91-20-3

Clean Water Section 307 Priority Pollutants
- Naphthalene: 91-20-3

Safe Drinking Water Act Maximum Contaminant Levels
- Naphthalene: 91-20-3

EPA/FIFRA Information:
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: 2
- Instability: 0
- Others: -

- Health: 1
- Flammability: 2
- 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: 07/28/2015

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