

## SECTION 1: Product and company identification

Product name : d'Bug  
Use of the substance/mixture : Insecticide  
Product code : 0848  
Company : Total Solutions  
P.O. Box 240014  
Milwaukee, WI 53224 - USA  
T (414) 354-6417  
Emergency number : Chemtec: (800) 424-9300

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification (GHS-US)

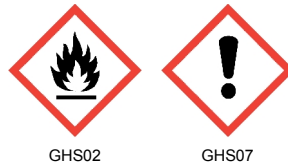
Flam. Liq. 3 H226  
Skin Sens. 1 H317

Full text of H-phrases: see section 16

### 2.2. Label elements

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

Flammable liquid and vapor  
May cause an allergic skin reaction

Precautionary statements (GHS-US) :

Keep away from heat, open flames, sparks. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical, lighting equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Avoid breathing mist, spray  
Contaminated work clothing must not be allowed out of the workplace  
Wear eye protection, protective clothing, protective gloves  
If on skin: Wash with plenty of soap and water.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Specific treatment (see First Aid measures on this label)  
If skin irritation or rash occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse  
In case of fire: Use carbon dioxide (CO<sub>2</sub>), dry extinguishing powder, foam to extinguish  
Store in a well-ventilated place. Keep cool  
Dispose of contents/container to comply with local/regional/national/international regulations.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

| Name         | Product identifier | %   | Classification (GHS-US)  |
|--------------|--------------------|-----|--|
| (+)-limonene | (CAS No) 5989-27-5 | 3-7 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Asp. Tox. 1, H304 |

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove the victim into fresh air. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Take off contaminated clothing and wash it before reuse. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth with water. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

##### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
- Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.
- Symptoms/injuries after ingestion : Gastrointestinal complaints. Nausea. Vomiting.

##### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

- Suitable extinguishing media : All extinguishing media allowed.

##### 5.2. Special hazards arising from the substance or mixture

- Reactivity : Upon combustion: CO and CO2 are formed.

##### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

##### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

##### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers.
- Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

##### 6.4. Reference to other sections

No additional information available

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures : Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep container closed when not in use.

Incompatible materials : Heat sources. Sources of ignition.

Storage area : Meet the legal requirements. Store in a cool area. Store in a dry area. Keep container in a well-ventilated place.

Special rules on packaging : meet the legal requirements. Keep only in original container.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

No additional information available

**8.2. Exposure controls**

Personal protective equipment : Safety glasses. Gloves. Protective clothing. Use appropriate personal protective equipment when risk assessment indicates this is necessary.



**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state : Liquid

Appearance : Milky white liquid.

Odor : Citrus scent

Odor threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : 129 °F Closed Cup

Relative evaporation rate (butyl acetate=1) : No data available

Flammability (solid, gas) : No data available

Explosion limits : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Vapor pressure : No data available

Relative density : No data available

Relative vapor density at 20 °C : No data available

Specific gravity / density : 0.993 g/ml

Solubility : Emulsifies in water.

Log Pow : No data available

Log Kow : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

VOC content : < 6 %

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Upon combustion: CO and CO2 are formed.

**10.2. Chemical stability**

No additional information available

**10.3. Possibility of hazardous reactions**

Refer to section 10.1 on Reactivity.

**10.4. Conditions to avoid**

No additional information available

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity : Not classified

| <b>(+)-limonene (5989-27-5)</b> |   |
|---------------------------------|---|
| LD50 oral rat                   | 4400 mg/kg body weight (Rat; OECD 423: Acute Oral Toxicity – Acute Toxic Class Method; Literature study; > 2000 mg/kg bodyweight; Rat; Read-across) |
| LD50 dermal rabbit              | > 5000 mg/kg body weight (Rabbit; Weight of evidence; Equivalent or similar to OECD 402)  |
| ATE CLP (oral)                  | 4400.000 mg/kg body weight  |

Skin corrosion/irritation : Not classified  
 Serious eye damage/irritation : Not classified  
 Respiratory or skin sensitization : May cause an allergic skin reaction.  
 Germ cell mutagenicity : Not classified  
 Carcinogenicity : Not classified

| <b>(+)-limonene (5989-27-5)</b> |                      |
|---------------------------------|----------------------|
| IARC group                      | 3 - Not Classifiable |

Reproductive toxicity : Not classified  
 Specific target organ toxicity (single exposure) : Not classified  
 Specific target organ toxicity (repeated exposure) : Not classified  
 Aspiration hazard : Not classified  
 Symptoms/injuries after inhalation : May cause respiratory irritation.  
 Symptoms/injuries after skin contact : May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.  
 Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.  
 Symptoms/injuries after ingestion : Gastrointestinal complaints. Nausea. Vomiting.

**SECTION 12: Ecological information**

**12.1. Toxicity**

| <b>(+)-limonene (5989-27-5)</b> |   |
|---------------------------------|---|
| LC50 fish 1                     | 720 µg/l (96 h; Pimephales promelas; Lethal)  |
| EC50 Daphnia 1                  | 0.36 mg/l (48 h; Daphnia magna; GLP)          |
| LC50 fish 2                     | 702 µg/l (96 h; Pimephales promelas)          |
| Threshold limit algae 1         | 150 mg/l (72 h; Desmodesmus subspicatus; GLP) |
| Threshold limit algae 2         | 2.62 mg/l (72 h; Desmodesmus subspicatus)     |

**12.2. Persistence and degradability**

| <b>(+)-limonene (5989-27-5)</b> |  |
|---------------------------------|--|
| Persistence and degradability   | Readily biodegradable in water. Forming sediments in water. Adsorbs into the soil. |
| ThOD                            | 3.29 g O <sub>2</sub> /g substance   |

**12.3. Bioaccumulative potential**

| <b>(+)-limonene (5989-27-5)</b> |  |
|---------------------------------|--|
| BCF fish 1                      | 864.8 - 1022 (Pisces; Fresh weight)  |
| Log Pow                         | 4.38 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 37 °C) |

(+)-limonene (5989-27-5)

Bioaccumulative potential

Potential for bioaccumulation ( $4 \geq \text{Log Kow} \leq 5$ ).

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

**SECTION 14: Transport information**

**Department of Transportation (DOT)**

**Additional information**

Other information : When transported by ground in non-bulk containers, this product utilizes the exception found under 49 CFR 173.150.

**ADR**

No additional information available

**Transport by sea**

No additional information available

**Air transport**

No additional information available

**SECTION 15: Regulatory information**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling 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 as required on the pesticide label:

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

**SECTION 16: Other information**

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

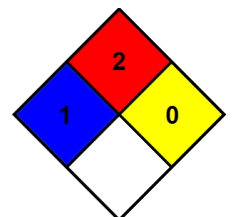
Full text of H-phrases:

|               |  |
|---------------|--|
| Asp. Tox. 1   | Aspiration hazard Category 1                 |
| Flam. Liq. 3  | Flammable liquids Category 3                 |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2         |
| Skin Sens. 1  | Skin sensitization Category 1                |
| H226          | Flammable liquid and vapor                   |
| H304          | May be fatal if swallowed and enters airways |
| H315          | Causes skin irritation                       |
| H317          | May cause an allergic skin reaction          |

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.*