

**SECTION 1: Product and company identification**

Trade name : Orange Away – 95% d-Limonene  
Use of the substance/mixture : Industrial use  
Solvent  
Product code : 0378  
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**

**GHS-US classification**

Flam. Liq. 3 H226  
Skin Irrit. 2 H315  
Eye Dam. 1 H318  
Skin Sens. 1 H317  
Asp. Tox. 1 H304

Full text of H statements : see section 16

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Flammable liquid and vapor  
May be fatal if swallowed and enters airways  
Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye damage

Precautionary statements (GHS-US) :

Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof ventilating, lighting, electrical equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Avoid breathing gas, mist, spray, vapors  
Wash thoroughly after handling  
Contaminated work clothing must not be allowed out of the workplace  
Wear protective gloves, protective clothing, eye protection, face protection  
If swallowed: Immediately call a POISON CENTER, a doctor  
If on skin: Wash with plenty of water  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a doctor, a POISON CENTER  
Specific treatment (see First aid measures on this label)  
Do NOT induce vomiting  
If skin irritation occurs: Get medical advice/attention  
If skin irritation or rash occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse  
Wash contaminated clothing 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  
Store locked up  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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### 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	%	GHS-US classification
(+)-limonene	(CAS No) 5989-27-5	60-100	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
UNDECETH-5	(CAS No) 34398-01-1	1-5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

A specific chemical identity and/or percentage of composition has been withheld as a trade secret. Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## 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 : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Take off immediately all contaminated clothing and wash it before reuse. Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Immediately call a poison center or doctor/physician. Rinse mouth with water.

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

- Symptoms/injuries : If you feel unwell, seek medical advice.
- Symptoms/injuries after inhalation : Irritation of the respiratory tract. Coughing. Headache.
- Symptoms/injuries after skin contact : Causes skin irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
- Symptoms/injuries after eye contact : Causes serious eye damage.
- Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. Risk of aspiration pneumonia. Nausea. Cramps/uncontrolled muscular contractions. Diarrhea.
- Chronic symptoms : Cracking of the skin. Dry skin.

### 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 : Foam. Carbon dioxide. Dry chemical powder.
- Unsuitable extinguishing media : Do not use a heavy water stream.

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

- Fire hazard : Flammable liquid and vapor.
- Explosion hazard : may be ignited by sparks. May form flammable/explosive vapor-air mixture.
- Reactivity : Reacts with (strong) oxidizers. Reacts with (some) acids. Reacts with (some) halogens compounds. Upon combustion: CO and CO<sub>2</sub> are formed.

### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. 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 : Isolate from fire, if possible, without unnecessary risk. No flames, No sparks. Eliminate all sources of ignition.

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

Protective equipment : Protective goggles. 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

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. In use, may form flammable vapor-air mixture. Keep away from open flame, sparks, excessive heat. - No smoking.

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. Do not get in eyes, on skin, or on clothing. Handle and open the container with care. Keep away from sources of ignition - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

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 only in the original container in a cool, well ventilated place away from : sparks, open flames, excessive heat. Keep container tightly closed.

Incompatible products : Oxidizing agent. strong acids.

Incompatible materials : Sources of ignition.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. halogens.

Storage area : Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place.

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

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

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



### SECTION 9: Physical and chemical properties

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

Physical state : Liquid

Appearance : Clear, colorless liquid.

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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	: 124 °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	: 0.85 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	: < 20 cSt
Viscosity, dynamic	: No data available
VOC content	: > 90 %

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts with (strong) oxidizers. Reacts with (some) acids. Reacts with (some) halogens compounds. Upon combustion: CO and CO2 are formed.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

#### 10.4. Conditions to avoid

Heat. Sparks. Open flame.

#### 10.5. Incompatible materials

strong acids. Oxidizing agents.

#### 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
<b>UNDECETH-5 (34398-01-1)</b>	
LD50 oral rat	> 1400 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.

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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	: May be fatal if swallowed and enters airways.
Symptoms/injuries after inhalation	: Irritation of the respiratory tract. Coughing. Headache.
Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: May be fatal if swallowed and enters airways. Risk of aspiration pneumonia. Nausea. Cramps/uncontrolled muscular contractions. Diarrhea.
Chronic symptoms	: Cracking of the skin. Dry skin.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>(+)-limonene (5989-27-5)</b>	
LC50 fish 1	720 µg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	0.36 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	150 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Read-across)
<b>UNDECETH-5 (34398-01-1)</b>	
LC50 fish 1	< 10 mg/l
EC50 Daphnia 1	< 10 mg/l
ErC50 (algae)	< 10 mg/l

### 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 (BCF; Pisces)
Log Pow	4.38 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Clean up even minor leaks or spills if possible without unnecessary risk. Handle empty containers with care because residual vapors are flammable.

## SECTION 14: Transport information

### Department of Transportation (DOT)

Transport document description : UN1993 Flammable liquids, n.o.s. (Terpene Hydrocarbons), 3, III  
UN-No.(DOT) : UN1993  
Proper Shipping Name (DOT) : Flammable liquids, n.o.s.  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

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Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Symbols : G - Identifies PSN requiring a technical name  
DOT Special Provisions (49 CFR 172.102) : B1,B52,IB3,T4,TP1,TP29  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
DOT Vessel Stowage Location : A

### Additional information

Emergency Response Guide (ERG) Number : 128  
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

UN-No. (IMDG) : 1993  
Proper Shipping Name (IMDG) : Flammable liquids, n.o.s. (Terpene Hydrocarbons)  
Class (IMDG) : 3 - Flammable liquids  
Packing group (IMDG) : III - substances presenting low danger  
Limited quantities (IMDG) : When transported by ocean, this product can be shipped as a limited quantity in containers ≤5 L.  
Other information (IMDG) : The marine pollutant mark is not required when transported on waterways in sizes of ≤5 L.

### 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.

UNDECETH-5 (34398-01-1)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity

## 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:

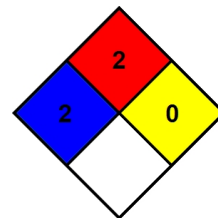
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage

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**TOTAL**  
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NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention 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

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