

Safety Data Sheet

SECTION 1: Product and company identification

Product name : Solvonene 3 – VOC-Compliant Alternative to 95% d-Limonene
Use of the substance/mixture : Solvent
Product code : 0453
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. 4 H227
Eye Dam. 1 H318
Skin Sens. 1 H317
Asp. Tox. 1 H304

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

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

Precautionary statements (GHS-US) :

Keep away from heat, open flames, sparks. - No smoking
Avoid breathing mist, spray
Contaminated work clothing must not be allowed out of the workplace
Wear eye protection, protective clothing, protective gloves
If swallowed: Immediately call a doctor, a POISON CENTER
If on skin: Wash with plenty of soap and water.
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
Do NOT induce vomiting
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 (CO₂), dry extinguishing powder, foam to extinguish
Store in a well-ventilated place. Keep cool
Store locked up
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

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Name	Product identifier	%	Classification (GHS-US)
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	(CAS No) 64742-47-8	30-60	Flam. Liq. 4, H227 Asp. Tox. 1, H304
Alkanes, C14-16	(CAS No) 90622-46-1	10-30	Asp. Tox. 1, H304
UNDECETH-5	(CAS No) 34398-01-1	5-10	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
(+)-limonene	(CAS No) 5989-27-5	1-5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 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 immediately all contaminated clothing and wash it before reuse. Wash skin with plenty of water. Soap may be used. 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. Immediately call a poison center or doctor/physician.
- 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 : If you feel unwell, seek medical advice.
- Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: May cause respiratory irritation. May cause drowsiness or dizziness. Headache.
- Symptoms/injuries after skin contact : 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. Gastrointestinal complaints.

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.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.
- 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 : 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

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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.
- 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.
- Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.
- Incompatible products : Oxidizing agent.
- Incompatible materials : Sources of ignition. Heat sources.
- Storage area : Store away from heat. Store in a cool area. Store in a dry area.
- 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. Protective clothing. Protective goggles. Safety glasses.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : clear, orange 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 : 182 °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 : 0.854 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

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VOC content : < 1 %

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

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

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Literature)

Alkanes, C14-16 (90622-46-1)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.8 mg/l/4h

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

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

(+)-limonene (5989-27-5)	
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 : EXPOSURE TO HIGH CONCENTRATIONS: May cause respiratory irritation. May cause drowsiness or dizziness. Headache.
Symptoms/injuries after skin contact : 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. Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity

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

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(+)-limonene (5989-27-5)	
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)
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
LC50 fish 1	> 100 mg/l (Pisces)
EC50 Daphnia 1	> 100 mg/l (Invertebrata)
Threshold limit algae 1	> 100 mg/l (Algae)
UNDECETH-5 (34398-01-1)	
LC50 fish 1	< 10 mg/l
EC50 Daphnia 1	< 10 mg/l
ErC50 (algae)	< 10 mg/l

12.2. Persistence and degradability

(+)-limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Adsorbs into the soil.
ThOD	3.29 g O /g substance
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
Persistence and degradability	Readily biodegradable in water. Adsorbs into the soil.

12.3. Bioaccumulative potential

(+)-limonene (5989-27-5)	
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)
Bioaccumulative potential	Potential for bioaccumulation (4 Log Kow 5).
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
Log Pow	6 - 8.2
Bioaccumulative potential	High potential for bioaccumulation (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.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT : Not regulated for transport

Additional information

Other information : No supplementary information available.

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.

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

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

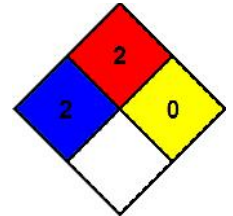
SECTION 16: Other information

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

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
H226	Flammable liquid and vapor
H227	Combustible liquid
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

- 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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