

SECTION 1: Product and company identification

Product name : Solvonene 3
 Use of the substance/mixture : Solvent
 Product code : 0453
 Company : Total Solutions
 P.O. Box 240014
 Milwaukee, WI 53224 - USA
 T 800-743-6417
athea.com
 Contact: Technical Department
 Emergency number : Chemtrec: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
 Flam. Liq. 4 H227
 Eye Dam. 1 H318
 Skin Sens. 1 H317
 Asp. Tox. 1 H304

2.2. Label elements

GHS US labelling
 Hazard pictograms (GHS US)



GHS05 GHS07 GHS08

Signal word (GHS US)
 Hazard statements (GHS US)

: Danger
 : Combustible liquid
 May be fatal if swallowed and enters airways.
 May cause an allergic skin reaction.
 Causes serious eye damage.
 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Avoid breathing mist, spray.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear gloves/protective clothing/eye protection .
 If swallowed: Immediately call a poison center or doctor.
 Do NOT induce vomiting.
 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.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing 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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
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Solvonene 3

Safety Data Sheet

Alkanes, C14-16	(CAS-No.) 90622-46-1	10-30	Asp. Tox. 1, H304
Undeceth-5	(CAS-No.) 34398-01-1	10-30	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
d-Limonene	(CAS-No.) 5989-27-5	1-5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
Dimethyl Succinate	(CAS-No.) 106-65-0	1-5	Eye Irrit. 2A, H319
Undecanol	(CAS-No.) 112-42-5	1-5	Skin Irrit. 2, H315

All hazardous chemicals, as determined by 29 CFR 1910.1200 have been listed. 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 : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. 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. Call a physician immediately.
- First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

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

- Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
- Symptoms/effects after skin contact : May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Risk of lung oedema.

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

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.
- Explosion hazard : No direct explosion hazard.
- Reactivity : Upon combustion: CO and CO₂ are formed.

5.3. Advice for firefighters

- Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
- Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.
- Packaging materials : Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

d-Limonene (5989-27-5)

Not applicable

Alkanes, C14-16 (90622-46-1)

Not applicable

Undeceth-5 (34398-01-1)

Not applicable

Undecanol (112-42-5)

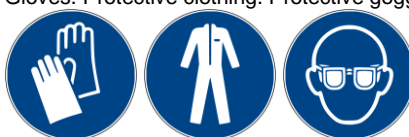
Not applicable

Dimethyl Succinate (106-65-0)

Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Protective clothing. Protective goggles. Safety glasses.



- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Solvonene 3

Safety Data Sheet

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: clear, orange liquid
Odour	: Citrus scent
Odour threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 182 °F Closed Cup
Relative evaporation rate (butylacetate=1)	: No data available
Flammability	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20°C	: No data available
Density	: 0.854 g/ml
Solubility	: Emulsifies in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (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	: < 3 %

SECTION 10: Stability and reactivity

10.1. Reactivity

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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

d-Limonene (5989-27-5)

LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Read-across, Dermal, 7 day(s))

Alkanes, C14-16 (90622-46-1)

LD50 oral rat	> 5250 mg/kg Source: IUCLID
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Solvonene 3

Safety Data Sheet

LD50 dermal rabbit	> 2000 mg/kg Source: IUCLID
LC50 Inhalation - Rat	> 5.8 mg/l/4h

Undeceth-5 (34398-01-1)	
LD50 oral rat	> 1400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg Source: Butch Company

Undecanol (112-42-5)	
LD50 oral rat	> 15800 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	5010 – 7940 mg/kg bw/day (24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 2.05 mg/l (EPA OPPTS 870.1300: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE CLP (oral)	3000 mg/kg bodyweight
ATE CLP (dermal)	5010 mg/kg bodyweight

Dimethyl Succinate (106-65-0)	
LD50 oral rat	6892 mg/kg (Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE CLP (oral)	6892 mg/kg bodyweight

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

d-Limonene (5989-27-5)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.
Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Risk of lung oedema.
Likely routes of exposure	: Skin and eyes contact

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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d-Limonene (5989-27-5)	
LC50 - Fish [1]	720 µg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	0.307 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)
LC50 - Fish [2]	702 µg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [2]	0.51 mg/l Test organisms (species): Daphnia magna

Alkanes, C14-16 (90622-46-1)	
LC50 - Fish [1]	0.003 mg/l Source: EPISUITE

Undeceth-5 (34398-01-1)	
LC50 - Fish [1]	3.9 mg/l Source: ECOTOX
EC50 - Crustacea [1]	< 10 mg/l

Solvonene 3

Safety Data Sheet

ErC50 algae	< 10 mg/l
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Undecanol (112-42-5)	
LC50 - Fish [1]	1.04 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	0.765 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

Dimethyl Succinate (106-65-0)	
LC50 - Fish [2]	50 – 100 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 48 h; Brachydanio rerio; Semi-static system; Fresh water; Experimental value)
EC50 - Crustacea [2]	> 100 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit - Algae [1]	> 100 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

d-Limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

Undecanol (112-42-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
ThOD	3.07 g O ₂ /g substance

Dimethyl Succinate (106-65-0)	
Persistence and degradability	Readily biodegradable in water. Inherently biodegradable. Highly mobile in soil.

12.3. Bioaccumulative potential

d-Limonene (5989-27-5)	
BCF - Fish [1]	864.8 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).

Alkanes, C14-16 (90622-46-1)	
Partition coefficient n-octanol/water (Log Pow)	7.2 Source: IUCLID

Undeceth-5 (34398-01-1)	
Partition coefficient n-octanol/water (Log Pow)	4 Source: EPISUITE

Undecanol (112-42-5)	
Partition coefficient n-octanol/water (Log Pow)	4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).

Dimethyl Succinate (106-65-0)	
BCF - Fish [1]	3.16 (BCF; BCFBAF v3.00; Pisces)
Partition coefficient n-octanol/water (Log Pow)	0.33 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

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

15.1. US Federal regulations

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.

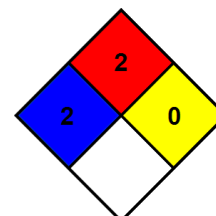


WARNING

This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

- Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.
- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



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.