

SECTION 1: Identification**1.1 Product identifier**

Product name ATF
Brand True Terpenes

1.4 Supplier's details

Name True Terpenes
Address Portland , Oregon
Telephone (888) 954-8550
email info@TrueTerpenes.com

1.5 Emergency phone number(s)

Poison Control Help Line:
1 (800) 222-1222

SECTION 2: Hazard identification**2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Hazardous components**

1. Linalool
Concentration ≥ 64 % (Volume)
EC no. 201-134-4

CAS no. 78-70-6

- Acute toxicity, dermal (chapter 3.1), Cat. 4
- Acute toxicity, oral (chapter 3.1), Cat. 5
- Eye damage/irritation (chapter 3.3), Cat. 2A
- Flammable liquids (chapter 2.6), Cat. 4
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 2

H227	Combustible liquid
H303	May be harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H315+H320	Causes skin and eye irritation
H319	Causes serious eye irritation
H402	Harmful to aquatic life

2. Alpha Pinene

Concentration >= 15 % (Volume)
CAS no. 80-56-8

- Aspiration hazard (chapter 3.10), Cat. 1
- Flammable liquids (chapter 2.6), Cat. 3
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 3
- Sensitization, skin (chapter 3.4), Cat. 1
- Skin corrosion/irritation (chapter 3.2), Cat. 2

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
H402	Harmful to aquatic life

3. Myrcene

Concentration >= 9 % (Volume)
CAS no. 123-35-3

- Aspiration hazard (chapter 3.10), Cat. 1
- Eye damage/irritation (chapter 3.3), Cat. 2A
- Flammable liquids (chapter 2.6), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 2

H226	Flammable liquid and vapor
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation

4. Limonene

Concentration $\geq 5\%$ (Volume)
EC no. 227-813-5
CAS no. 5989-27-5

- Acute toxicity, dermal (chapter 3.1), Cat. 5
- Acute toxicity, oral (chapter 3.1), Cat. 5
- Aspiration hazard (chapter 3.10), Cat. 1
- Flammable liquids (chapter 2.6), Cat. 3
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 1
- Sensitization, skin (chapter 3.4), Cat. 1
- Skin corrosion/irritation (chapter 3.2), Cat. 2

H226 Flammable liquid and vapor
H303+H313 May be harmful if swallowed or in contact with skin
H304 May be fatal if swallowed and enters airways
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

5. Beta Caryophyllene

Concentration $\geq 2\%$ (Volume)
CAS no. 87-44-5

6. Terpinolene

Concentration $\geq 2\%$ (Volume)
EC no. 209-578-0
CAS no. 586-62-9

- Flammable liquids (chapter 2.6), Cat. 4
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 1

H227 Combustible liquid
H410 Very toxic to aquatic life with long lasting effects

7. Humulene

Concentration $\leq 1\%$ (Volume)
CAS no. 6753-98-6

- Eye damage/irritation (chapter 3.3), Cat. 2A
- Flammable liquids (chapter 2.6), Cat. 4
- Skin corrosion/irritation (chapter 3.2), Cat. 2
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3

H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

8. Beta Pinene

Concentration	< 1 % (Volume)
EC no.	No data available.
CAS no.	127-91-3

- Acute toxicity, dermal (chapter 3.1), Cat. 4
- Acute toxicity, inhalation (chapter 3.1), Cat. 4
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Aspiration hazard (chapter 3.10), Cat. 1
- Eye damage/irritation (chapter 3.3), Cat. 2A
- Flammable liquids (chapter 2.6), Cat. 3
- Sensitization, skin (chapter 3.4), Cat. 1
- Skin corrosion/irritation (chapter 3.2), Cat. 2
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3

H226	Flammable liquid and vapor
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H335	May cause respiratory irritation

SECTION 4: First-aid measures**4.1 Description of necessary first-aid measures**

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Personal protective equipment for first-aid responders
No data available.

4.2 Most important symptoms/effects, acute and delayed
No data available.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
No data available.

SECTION 5: Fire-fighting measures

5.2 Specific hazards arising from the chemical

Linalool: Static charges generated by emptying package in or near flammable vapor may cause flash fire. Fire may produce irritating, corrosive and / or toxic gases.

Alpha Pinene: Carbon oxides.

Limonene: Static charges generated by emptying package in or near flammable vapor may cause flash fire. Fire may produce irritating, corrosive and / or toxic gases.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.2 Environmental precautions

No data available.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition. No smoking. Take measures to prevent the buildup of electrostatic charge. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Container which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end use(s)

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

SECTION 8: Exposure controls/personal protection**8.2 Appropriate engineering controls**

No data available.

8.3 Individual protection measures, such as personal protective equipment (PPE)**Eye/face protection**

No data available.

Skin protection

No data available.

Body protection

No data available.

Respiratory protection

No data available.

Thermal hazards

No data available.

Control banding approach

No data available.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

Appearance/form (physical state, color, etc.)	No data available.
Odor	No data available.
Odor threshold	No data available.
pH	No data available.
Melting point/freezing point	No data available.
Initial boiling point and boiling range	No data available.

Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	No data available.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

10.5 Incompatible materials

Linalool: Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Strong oxidizing agents.

Alpha Pinene: Vapors may form explosive mixture with air. Heat, flames and sparks. Strong oxidizing agents.

Myrcene: Strong oxidizing agents. Heat, flames and sparks.

Beta Pinene: Strong oxidizing agents. Heat, flames, and sparks. Vapors may form explosive mixture with air.

10.6 Hazardous decomposition products

Linalool: No data available.

Limonene: No hazardous decomposition products if stored and handled as indicated.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Linalool: LD50 Oral: Rat, 2,790 mg/kg
LD50 Dermal: Rabbit, 2,000 mg/kg

Alpha Pinene: No data available.

Limonene: Maybe fatal if swallowed and enters airways. May be harmful in contact with skin. May cause an allergic skin reaction.

// ----- From the Suggestion report (09/12/2017, 11:52 PM) ----- //
ATE (inhalation, gaseous) of mixture: 450000 ppmv

// ----- From the Suggestion report (09/12/2017, 11:52 PM) ----- //
ATE (oral) of mixture: 3378.38 mg/kg

Skin corrosion/irritation

Linalool: Causes skin irritation.
Guinea Pig - skin irritation, 24h, Draize Test
Rabbit - irritant (OECD Guideline 405)

Alpha Pinene: No data available.

Serious eye damage/irritation

Linalool: Causes serious eye irritation.
Rabbit - moderate eye irritation, Draize Test
Rabbit - slightly irritating (OECD Guideline 405)

Alpha Pinene: No data available.

Limonene: Direct contact with eyes may cause temporary irritation.
Eyes - rabbit. Result: No eye irritation.
(OECD Test Guideline 405)

Respiratory or skin sensitization

Linalool: Patch-test / Human: Non-sensitizing
Draize test / Guinea Pig: Non-sensitizing

Alpha Pinene: No data available.

Limonene: May cause an allergic skin reaction.
Mouse. Result: May cause sensitisation by skin contact.
(OECD Test Guideline 429)

Germ cell mutagenicity

Linalool: Results from a number of mutagenicity studies with microorganisms, mammalian cell cultures and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Alpha Pinene: No data available.

Limonene: Mouse
Lymphocyte
Result: Negative

Rat - Male
Result: Negative

Carcinogenicity

Linalool: OSHA: Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

Alpha Pinene: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Myrcene: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Limonene: IARC Monographs: Overall Evaluation of Carcinogenicity - CARVENE (CAS 5989-27-5) 3 Not classifiable as to carcinogenicity to humans.

OSHA: Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

Beta Caryophyllene: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probably, possibly or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probably, possibly or confirmed human carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probably, possibly or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probably, possibly or confirmed human carcinogen by OSHA.

Terpinolene: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive toxicity

Linalool: This product is not expected to cause reproductive or developmental effects.

Alpha Pinene: No data available.

Summary of evaluation of the CMR properties

Linalool: No data available.

STOT-single exposure

Linalool: Not Classified.

Alpha Pinene: No data available.

Limonene: Not classified.

STOT-repeated exposure

Linalool: Not Classified.

Alpha Pinene: No data available.

Limonene: Repeated dose toxicity - mouse - male and female - No observed adverse effect level - 1,650 mg/kg -
Lowest observed adverse effect level - 3,300 mg/kg.

Aspiration hazard

Linalool: No data available.

SECTION 12: Ecological information

Toxicity

Linalool: Activated sludge of a predominantly domestic sewage: EC10, > 100 mg/l, 3 hours

Green Algae (*chlamydomonas variabilis*): EC50, 88.3 mg/l, 96 hours DIN 38412 Part 9 static. The details of the toxic effect related to the nominal concentration.

Daphnia magna: EC50, 20 mg/l, 48 hours DIN 38412 Part 11 static. The details of the toxic effect related to the nominal concentration.

Ide, silver or golden orfe (*leuciscus idus*): LC50, 22 - 46 mg/l, 96 hours DIN 38412 Part 15 static. The details of the toxic effect related to the nominal concentration.

Fish: LC50-R, 27.8 mg/l, 96 hours.

Alpha Pinene: No data available.

Limonene: Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Persistence and degradability

Linalool: Biological/Abiological Degradation
Test method: OECD 301D; EEC 92/69, C.4-E (aerobic), municipal sewage treatment plant effl.
Method of analysis: BOD of the ThOD
Degree of elimination: 60 - 70% (28 d)
Evaluation: Readily biodegradable (according to OECD criteria)

Alpha Pinene: No data available.

Limonene: Biodegradability: Result: 71% - Readily biodegradable. (OECD Test Guideline 301B)

Bioaccumulative potential

Linalool: Significant accumulation in organisms is not to be expected.

Alpha Pinene: No data available.

Mobility in soil

Linalool: No data available.

Results of PBT and vPvB assessment

Linalool: No data available.

Other adverse effects

Linalool: No data available.

Limonene: EC50 Water Flea (*Daphnia pulex*) 69.6 mg/l, 48 hours

LC50 Fathead minnow (*Pimephales promelas*) 0.619 - 0.796 mg/l, 96 hours

LC50 Rainbow trout, donaldson trout (*Oncorhynchus mykiss*) 35 mg/l, 4 days

EC50 Activated sludge 3.94 mg/l

SECTION 13: Disposal considerations

Disposal of the product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Disposal of contaminated packaging

Offer surplus and non-recyclable solutions to a licensed disposal company.

Waste treatment

No data available.

Sewage disposal

No data available.

SECTION 14: Transport information**DOT (US)**

UN Number:

Class:

Packing Group:

Proper Shipping Name:

Reportable quantity (RQ):

Marine pollutant:

Poison inhalation hazard:

IMDG

UN Number:

Class:

Packing Group:

EMS Number:

Proper Shipping Name:

IATA

UN Number:

Class:

Packing Group:

Proper Shipping Name:

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations specific for the product in question****CAA Section 112 HAPs List**

Not regulated.

CAA Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. This product does not contain any chemicals known to State of California to cause cancer,

birth defects, or any reproductive harm. This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Massachusetts Right to Know Components

Chemical name: α -Pinene

CAS number: 80-56-8

New Jersey Right to Know Components

Chemical Name: 7-Methyl-3-methylenoocta-1,6-diene,

CAS Number: 123-35-3. Chemical Name: Caryophyllene

CAS Number: 87-44-5. Chemical Name: Humulene

CAS Number: 6753-98-6. (-)-Pin-2(10)-ene, CAS No: 127-91-3. Chemical name: α -Pinene

CAS number: 80-56-8

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Pennsylvania Right to Know Components

Chemical Name: 7-Methyl-3-methylenoocta-1,6-diene,

CAS Number: 123-35-3. Chemical Name: Caryophyllene

CAS Number: 87-44-5. Chemical Name: Humulene

CAS Number: 6753-98-6. (-)-Pin-2(10)-ene, CAS No: 127-91-3. Chemical name: α -Pinene

CAS number: 80-56-8

Right to Know Components (Pennsylvania, New Jersey)

p-Mentha-1,4(8)-diene, CAS No. 586-62-9

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 302 Extremely Hazardous Substance

Not listed.

SARA 304 Emergency Release Notification

Not regulated.

SARA 311 / 312

No SARA hazards.

SARA 311 / 312 Hazardous Chemical

Yes

SARA 311 / 312 Hazards

Fire hazard, acute health hazard. Fire Hazard. Fire hazard, acute health hazard.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

SARA 313 (TRI Reporting)

Not regulated.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313. This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA Hazard Categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SDWA

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt.D)

Not regulated.

US Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

US. California Proposition 65 CRT: Listed Substance

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed. CARVENE (CAS 5989-27-5)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

SECTION 16: Other information

True Terpenes cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufactures, and technical groups and is considered to be accurate to the best of True Terpenes' knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.