



# SAFETY DATA SHEET

## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 1 (12)

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TERPINEOL ALPHA  
Cust. Material : 00014011  
SDS Number : R00000109778  
Product Use Description : Fragrance Ingredient

Company : IFF Inc.  
600 Highway 36  
Hazlet NJ 07730

Telephone : (732) 264-4500  
Telefax : (732) 335-2551  
Emergency telephone : +1 800 424 9300

### SECTION 2 HAZARDS IDENTIFICATION

#### GHS-Classification

Flammable liquids, Category 4  
Skin irritation, Category 2  
Eye irritation, Category 2A

#### GHS-Labeling

Symbol(s)



Signal Word

: Warning

Hazard Statements

: H227: Combustible liquid.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.

Precautionary Statements

: P210: Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
P280: Wear protective gloves/ eye protection/ face protection.

Version : 6  
Revision Date : 04/19/2022

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## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 2 (12)

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Carcinogenicity:

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

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous ingredients

Component	CAS-No.
3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-	98-55-5

### SECTION 4. FIRST AID MEASURES

#### First aid procedures

- Inhalation : Remove from exposure site to fresh air and keep at rest. If victim is unconscious, remove foreign bodies from the mouth. If victim has stopped breathing, give artificial respiration. Obtain medical advice.
- Skin contact : Remove contaminated clothes. Wash thoroughly with water (and soap). Contact physician if symptoms persist.
- Eye contact : Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.
- Ingestion : Rinse mouth with water and obtain medical advice.

Version : 6  
Revision Date : 04/19/2022

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# SAFETY DATA SHEET

## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 3 (12)

### Notes to physician

Risks : Causes skin irritation.  
Causes serious eye irritation.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Flammable properties

Flash point : 196 °F (91 °C)

#### Fire fighting

Suitable extinguishing media : Use water spray, dry chemical, carbon dioxide or appropriate foam.

#### Protective equipment and precautions for firefighters

Special protective equipment for fire-fighters : Wear NIOSH approved self-contained breathing apparatus and full protective clothing when fighting fires involving chemicals. Use water spray to cool containers exposed to fire.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

Environmental precautions : Keep away from drains, surface- and groundwater and soil.

Methods for containment /  
Methods for cleaning up : Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

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## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 4 (12)

### SECTION 7. HANDLING AND STORAGE

- Handling : Avoid excessive inhalation of concentrated vapors. Follow good manufacturing practices for housekeeping and personal hygiene. Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period. Contaminated clothing and shoes should be thoroughly cleaned before re-use.
- If appropriate, procedures used during the handling of this material should also be used when cleaning equipment or removing residual chemicals from tanks or other containers, especially when steam or hot water is used, as this may increase vapor concentrations in the workplace air. Where chemicals are openly handled, access should be restricted to properly trained employees. Keep all heated processes at the lowest necessary temperature in order to minimize emissions of volatile chemicals into the air.
- Advice on protection against fire and explosion : Keep away from ignition sources and naked flame.
- Requirements for storage areas and containers : Store in a cool, dry, ventilated area away from heat sources. Keep containers upright and tightly closed when not in use.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	Listed by	Value type	Exposure limit(s)
3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-	USA. ACGIH Threshold Limit Values (TLV)	8-hour, time-weighted average	20 ppm

#### Engineering measures

- Engineering measures : Where feasible, isolate mixing rooms and other areas where this material is used or openly handled. Maintain these areas under negative air pressure relative to the rest of the plant. Where feasible, use closed systems to transfer and process this

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# SAFETY DATA SHEET

## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 5 (12)

material

### Personal protective equipment

- Eye protection : Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.
- Hand protection : Avoid skin contact. Use chemically resistant gloves.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Respiratory protection : Use local exhaust ventilation around open tanks and other open sources of potential exposures in order to avoid excessive inhalation, including places where this material is openly weighed or measured. In addition, use general dilution ventilation of the work area to eliminate or reduce possible worker exposures. No respiratory protection is required during normal operations in a workplace where engineering controls such as adequate ventilation, etc. are sufficient.

If engineering controls and safe work practices are not sufficient, an approved, properly fitted respirator with organic vapor cartridges or canisters and particulate filters should be used:

- a) while engineering controls and appropriate safe work practices and/or procedures are being implemented; or
- b) during short term maintenance procedures when engineering controls are not in normal operation or are not sufficient; or
- c) if normal operational workplace vapor concentration in the air is increased due to heat ;
- d) during emergencies; or
- e) if engineering controls and operational practices are not sufficient to reduce airborne concentrations below an established occupational exposure limit.

- Hygiene measures : To the extent deemed appropriate, implement pre-placement and regularly scheduled ascertainment of symptoms and spirometry testing of lung function for workers who are regularly exposed to

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# SAFETY DATA SHEET

## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 6 (12)

this material.

To the extent deemed appropriate, use an experienced air sampling expert to identify and measure volatile chemicals that could be present in the workplace air to determine potential exposures and to ensure the continuing effectiveness of engineering controls and operational practices to minimize exposure.

### Protective measures

: In December 2003, the National Institute for Occupational Safety and Health ("NIOSH") published an Alert on preventing lung disease in workers who use or make flavorings [NIOSH Publication Number 2004-110].

In August 2004, the United States Flavor and Extract Manufacturers Association (FEMA) issued a report entitled "Respiratory Safety in the Flavor Manufacturing Workplace".

Both of these reports provide recommendations for reducing employee exposure and for medical surveillance in the workplace. The recommendations in these reports are generally applicable to the use of any chemical in the workplace and you are strongly urged to review both of these reports.

The report published by FEMA also contains a list of "high priority" chemicals. If any of these chemicals are present in this product at a concentration  $\geq 1.0\%$  due to an intentional addition by IFF, the chemical(s) will be identified in this safety data sheet.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Physical state : liquid  
Appearance : CLEAR LIQUID  
Color : colorless  
  
Odor : conforms to standard

### Safety data

Flash point : 196 °F (91 °C)  
  
Flammability (solid, gas) : The product is not flammable.

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Version : 6  
Revision Date : 04/19/2022

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## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 7 (12)

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Freezing point : -4 °F (-20 °C)  
at 1,013.00 hPa (1,013 hPa)  
Method: OECD Test Guideline 102

Boiling point : 426.0 °F (218.9 °C)  
at 1,013.00 hPa (1,013 hPa)  
Method: OECD Test Guideline 103

Vapor pressure : .06 hPa (0.06 hPa)  
Note: Calculated

Relative density (20 °C) : 0.9330 - 0.9370

Water solubility : 2.87 g/l  
at 73 °F (23 °C)  
Method: Purge & Trap

Partition coefficient: n-octanol/water : log Pow: 2.60  
at 86 °F (30 °C) Method: OECD Test Guideline 117

Viscosity, dynamic : 37.9 mPa.s  
at 77 °F (25 °C)  
Method: OECD 114

### SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Remarks: Direct sources of heat.

Chemical stability : Remarks: Presents no significant reactivity hazard, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

Hazardous decomposition products : Note: Carbon monoxide and unidentified organic compounds may be formed during combustion.

Version : 6  
Revision Date : 04/19/2022

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Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 8 (12)

### SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Acute toxicity estimate  
Dose: 4,250 mg/kg  
Method: Calculation method

Acute oral toxicity (Component) : Component: 98-55-5  
LD50 Rat  
Dose: 4,300 mg/kg  
Method: OECD Test Guideline 401  
Remarks: RIFM

Component: 7299-41-4  
LD50 Rat  
Dose: 4,300 mg/kg  
Remarks: RIFM

Acute dermal toxicity : Acute toxicity estimate  
Dose: 2,471 mg/kg  
Method: Calculation method

Acute dermal toxicity (Component) : Component: 98-55-5  
LD50 Rabbit  
Dose: > 3,000 mg/kg  
Method: OECD Test Guideline 402  
LD50 Rat  
Dose: > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: REACH data  
Based on data from similar materials

Component: 7299-41-4  
LD50 Rabbit  
Dose: > 3,000 mg/kg

Skin irritation (Component) : Component: 98-55-5  
Rabbit  
Classification: Causes skin irritation.  
Result: Skin irritation  
Method: OECD Test Guideline 404  
Exposure time: 24 h

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Revision Date : 04/19/2022

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# SAFETY DATA SHEET

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Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 9 (12)

Component: 7299-41-4  
Rabbit  
Result: Skin irritation  
Exposure time: 24 h

Eye irritation(Component) : Component: 98-55-5  
Rabbit  
Classification: Causes serious eye irritation.  
Result: Eye irritation  
Method: OECD Test Guideline 405  
Exposure time: 72 h

Sensitization (Component) : Component: 98-55-5  
LLNA Rat  
Result: causes no sensitization  
Method: OECD Test Guideline 429

Component: 7299-41-4  
Maximization Test Guinea pig  
Result: Did not cause sensitization on laboratory animals.

Repeated dose toxicity(Component) : Component: 98-55-5  
OralRat  
NOEL: > 314 mg/kg  
Method: OECD Test Guideline 408  
Remarks: REACH data  
Based on data from similar materials  
OralRat  
NOEL: > 750 mg/kg  
Method: OECD Test Guideline 422  
Remarks: REACH data  
Based on data from similar materials

Component: 7299-41-4

Carcinogenicity (Component) : Component: 98-55-5

### SECTION 12. ECOLOGICAL INFORMATION

Version : 6  
Revision Date : 04/19/2022

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## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 10 (12)

Component:  
98-55-5

alpha-Terpineol

Toxicity to fish:

semi-static test LC50

Species: Brachydanio rerio (zebrafish)

Dose: 70 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Information taken from reference works and the literature.

Toxicity to daphnia and other aquatic invertebrates:

static test EC50

Species: Daphnia magna (Water flea)

Dose: 73 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Information taken from reference works and the literature.

Toxicity to algae:

static test EC50

Species: Pseudokirchneriella subcapitata (aglae)

Dose: 68 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Information taken from reference works and the literature.

Toxicity to algae:

static test NOEC

Species: Pseudokirchneriella subcapitata (aglae)

Dose: 3.9 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Information taken from reference works and the literature.

Toxicity to bacteria:

static test NOEC

Species: activated sludge

Dose: 25.7 mg/l

Method: OECD Test Guideline 310

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Revision Date : 04/19/2022

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## INTERNATIONAL FLAVORS & FRAGRANCES

Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 11 (12)

### SECTION 13. DISPOSAL CONSIDERATIONS

Contaminated packaging : Place material into sealed containers and dispose of in accordance with local, state and federal regulations.

### SECTION 14. TRANSPORT INFORMATION

DOT Proper shipping name : Combustible liquid, n.o.s.  
(alpha-terpineol)  
Labels : NONE  
UN number : 1993  
Class : CBL  
Packing group : III  
Emergency Response : 128  
Guidebook Number

DOT NON-BULK Not dangerous goods

IATA Not dangerous goods

IMDG Not dangerous goods

Other information : Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

### SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

Reportable Quantity :

HMIS Classification : Health Hazard: 1  
Chronic Health Hazard: /  
Flammability: 1

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Product TERPINEOL ALPHA

Print Date 04/20/2022

Page 12 (12)

Physical and chemical hazards: 0

### SECTION 16. OTHER INFORMATION

#### Further information

The information in this MSDS was obtained from current and reliable sources. However the data is provided without any warrant, expressed or implied, regarding its correctness or accuracy. Since the use, handling, storage and disposal of this product are beyond IFF control, it is the responsibility of the user both to determine safe conditions for the use of this product and to assume liability of loss, damage, or expense arising out of the product's improper use. No warranty expressed or implied regarding the product described herein shall be created by or inferred from any statement or omission in this MSDS. Various Federal, State or Provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in this MSDS. The user should review these regulations to ensure full compliance.

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