

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

### **1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

#### 1.1 Product identifier

**502142 T**

NATURAL & ARTIFICIAL LEMON FLAVOR

© Firmenich product

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Concentrated aromatic raw material.

Not for personal use in this form or concentration.

For manufacturing use only.

#### 1.3 Details of the supplier of the safety data sheet

**Colin McIntosh, PhD; Chemist**

Firmenich Inc.

P.O. Box 5880

Princeton - New Jersey 08543 - USA

colin.mcintosh@firmenich.com

Tel.: +1.609.452.10.00 - Fax.: +1.609.275.72.38

#### 1.4 Emergency telephone number

FOR INFORMATION OR IN AN EMERGENCY CALL CHEMTREC @ 1-800-424-9300 or 1-703-527-3887.

### **2 HAZARDS IDENTIFICATION**

#### 2.1 Classification of the substance or mixture

##### 2.1.1 Classification according to Regulation (EC) N° 1272/2008 [CLP/GHS]

Flammable Liquid - Cat. 3	H226
Aspiration Hazard - Cat. 1	H304
Skin Irritation - Cat. 2	H315
Skin Sensitization - Cat. 1	H317
Environmental Hazard (acute) - Cat. 1	H400
Environmental Hazard (chronic) - Cat. 1	H410

##### 2.1.2 Classification according to 67/548/EEC or 1999/45/EC

#### **Symbols:**

	Flammable
Xn	Harmful
N	Dangerous for the environment

#### **Risks Phrases:**

R10	Flammable.
R38	Irritating to skin.
R43	May cause sensitization by skin contact.

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.

### 2.1.3 Additional information

Full text of R- and S-phrases: see section 16

### 2.2 Label elements

#### **Hazard pictograms:**



**Signal Word:**  
Danger

#### **Hazard Statements:**

H304 May be fatal if swallowed and enters airways.  
H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H410 Very toxic to aquatic life with long lasting effects.

#### **Precautionary Statements:**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P235 Keep cool.  
P240 Ground/bond container and receiving equipment.  
P241 Use rated explosion-proof electrical equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.

#### **Hazard Inducers:**

Limonene  
2,6-Octadienal, 3,7-Dimethyl-

### 2.3 Other hazards

No data available at this time.

## **3 COMPOSITION/INFORMATION ON INGREDIENTS**

Mixture of aromatic substances.

Contains :

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

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70.0 - 80.0%	<p>limonene N° CAS : 0000138-86-3 / N° EINECS: 205-341-0 Classification: Xn N - R38,R43,R50/53,R65,R10 GHS Classification: Skin Irritation - Cat. 2 Skin Sensitization - Cat. 1 Environmental Hazard (acute) - Cat. 1 Environmental Hazard (chronic) - Cat. 1</p>
7.5 - 10.0%	<p>2,6-Octadienal, 3,7-dimethyl- N° CAS : 0005392-40-5 / N° EINECS: 226-394-6 Classification: Xi - R38,R43 GHS Classification: Skin Irritation - Cat. 2 Skin Sensitization - Cat. 1</p>
0.5 - 1.0%	<p>2,6-Octadien-1-ol, 3,7-dimethyl-, acetate, (E)- N° CAS : 0000105-87-3 / N° EINECS: 203-341-5 Classification: N - R51/53 GHS Classification: Environmental Hazard (chronic) - Cat. 2</p>
0.1 - 0.5%	<p>Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene- N° CAS : 0000127-91-3 / N° EINECS: 204-872-5 Classification: Xn N - R43,R50/53,R65,R10 GHS Classification: Skin Sensitization - Cat. 1 Environmental Hazard (acute) - Cat. 1 Environmental Hazard (chronic) - Cat. 1</p>
0.1 - 0.5%	<p>6-Octen-1-ol, 3,7-dimethyl- N° CAS : 0000106-22-9 / N° EINECS: 203-375-0 Classification: Xi N - R38,R43,R51/53 GHS Classification: Skin Irritation - Cat. 2 Skin Sensitization - Cat. 1</p>
0.1 - 0.5%	<p>6-Octen-1-ol, 3,7-dimethyl-, acetate N° CAS : 0000150-84-5 / N° EINECS: 205-775-0 Classification: Xi N - R38,R51/53 GHS Classification: Eye Irritation - Cat.2 Skin Irritation - Cat. 2 Environmental Hazard (chronic) - Cat. 2</p>
0.1 - 0.5%	<p>1,6-Octadien-3-ol, 3,7-dimethyl-, acetate N° CAS : 0000115-95-7 / N° EINECS: 204-116-4 Classification: N - R51/53 GHS Classification: -</p>

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

### **4 FIRST-AID MEASURES**

#### 4.1 Description of first aid measures

General information:

As in all cases of potential poisoning, Obtain medical advice immediately.

In case of eye contact:

In the event of contact with the eyes, irrigate with water for at least 15 minutes; obtain medical advice if irritation persists.

In case of inhalation:

In the event of exposure to vapors, immediately remove from the area to a fresh air environment.

In case of skin contact:

Remove contaminated clothes. Wash skin with large volumes of water.

If irritation persists, or any sign of tissue damage is apparent, obtain medical advice immediately.

In case of ingestion:

In the event of accidental ingestion, rinse mouth with water. Give up to one tumbler (half pint) of milk or water.

Obtain medical advice immediately.

Do not induce vomiting, obtain medical advice immediately.

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

No information available on the product itself.

#### 4.3 Indication of immediate medical attention and special treatment needed

None known.

### **5 FIRE-FIGHTING MEASURES**

#### 5.1 Extinguishing media

In the event of fire, adequate extinguishers should be used. Avoid inhalation of smoke and fumes. In case of insufficient ventilation, wear suitable respiratory equipment.

Cool fire exposed containers with water spray.

Extinguishing media: Foam, carbon dioxide or dry chemical.

#### 5.2 Special hazard arising from the substance or mixture

Closed containers may build up pressure if exposed to heat (fire).

#### 5.3 Advice for fire-fighters

No specific advice.

### **6 ACCIDENTAL RELEASE MEASURES**

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Adequate protective gloves should be worn when handling spillages. No smoking. Avoid naked flames or other potential sources of ignition (eg. electrical equipment).

Avoid skin contamination and inhalation of vapour.

Individual washing routines should be followed after any potential contact.

Ensure adequate ventilation in working areas following accidental releases.

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

For emergency personnel:  
Apply the same recommendations as section 6.1

### 6.2 Environmental precautions

Do not discharge directly into drains, air, into soil or into the aquatic environment.

### 6.3 Methods and material for containment and cleaning up

For containment:

Small spills can be wiped up with a cloth or paper. Standard absorbents can be used (saw dust, sand, vermiculite). Wear rubber gloves. Avoid contact with skin. If skin contact occurs, wash liberally with soap and water.

For cleaning-up:

Spillages should be disposed of in accordance with Governmental Regulations.

## 7 HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Wear adequate protective gloves protection and eye/face protection.

No smoking. Avoid any sources of ignition.

Avoid exposing to high temperature during processing.

Do not ingest or apply to the skin as such. Good personal washing routines should be followed.

Maintain adequate local and general ventilation where product is handled.

#### 7.1.1 Protective measures

Keep strict control of dust accumulation to a minimum. Maintain adequate local and general ventilation where product is handled. Avoid any sources of ignition.

#### 7.1.2 Advice on general occupational hygiene

Good personal washing routines should be followed.

### 7.2 Conditions for safe storage, including any incompatibilities

It is good general practice to store in closed, preferably full, containers away from heat sources, and protected from extremes of temperature. Do not re-use the empty container.

Respect general rules for compatibility storage.

### 7.3 Specific end use(s)

Not available at this time.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

0000138-86-3 : d-Limonene (All forms)

AIHA Workplace Environmental Exposure Levels (1999-JAN)

TWA (1999-JAN) : 30 ppm , 8 hours (All forms)

### 8.2 Exposure controls

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

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Avoid exposing to high temperature during processing.  
Maintain adequate local and general ventilation where product is handled.

### 8.2.1 Appropriate engineering controls

Maintain adequate local and general ventilation where product is handled and dispensed.

### 8.2.2 Environmental exposure controls

Not available at this time. Minimize release to the environment.

### 8.3 Personal protection

Respiratory protection: None required; avoid breathing vapors.

Hand protection: Adequate Protective Gloves should be worn.

Eye protection: Adequate safety glasses should be used.

Skin protection: Wear protective clothing, overall if necessary to limit the odour contamination of personal clothing. Individual washing routines should be followed after any potential contact.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance :	FLUID AND LIMPID LIQUID
Colour :	PALE YELLOW TO PALE GREEN
Odour :	Characteristic strong odour according to the commercial description of the substance.

pH :	Not available
Melting point/range (°C) :	Not available
Initial boiling point/range (°C) :	Not available
Flash point (closed cup) :	= 124 Fahrenheit (= 51 Centigrade)
Evaporation rate :	Not available
Flammability (solid/gas) :	Not available
Upper/lower flammability or explosive limits :	Not available
Vapor pressure (At 20°C in mm Hg ) :	
Calculated vapor pressure (At 20°C in mm Hg):	1.0
Vapour density :	Not available
Relative density (d 20/20) :	0.847 - 0.857
Water solubility (20°C) :	Not applicable
Partition coef. (n-octanol/water) :	Not applicable
Auto-ignition temperature (°C):	Not available
Decomposition temperature :	Not available
Viscosity :	Not available
Explosive properties :	Not available
Oxidizing properties :	Not available
VOC Content less than:	91%

## 10 STABILITY AND REACTIVITY

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

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### 10.1 Reactivity

No reaction known with water.

### 10.2 Chemical stability

Presents no significant reactivity hazard. Normally stable even at elevated temperatures and pressures. Avoid temperatures above or near to the flash point. Not pyrophoric nor reactive with water. Does not undergo explosive decomposition, is shock stable, and is not an oxygen donor. Does not form explosive mixtures with other organic materials. Will not undergo hazardous exothermic polymerization.

### 10.3 Possibility of hazardous reactions

Not known.

### 10.4 Conditions to avoid

Avoid temperatures above or at least 5 °C below flash point for any flammable liquids.

Do not heat closed containers.

Avoid contact with oxidizing agents.

### 10.5 Incompatible materials

Avoid strong oxidizing agents.

### 10.6 Hazardous decomposition products

Contact with water or storage under recommended conditions for one year should not produce dangerous decomposition products.

## **11 TOXICOLOGICAL INFORMATION**

This preparation has not been subjected to toxicological testing as an entity but has been blended from materials with established toxicological bibliographies. In view of the difficulty of using current standard toxicological evaluation techniques to predict potential hazards to susceptible individuals or arising from unforeseeable potentiation, this preparation should be considered and handled as if it displayed health hazards and treated in consequence with all possible precaution.

## **12 ECOLOGICAL INFORMATION**

This preparation has not been subjected to ecotoxicological testing as an entity. In view of the difficulty of using current standard ecotoxicological evaluation techniques to predict the impact of particular modes of release on vulnerable or localised parts of the ecosystem, this preparation should be considered and handled as if it displayed potential environmental hazards, and treated in consequence with all possible precaution.

## **13 DISPOSAL CONSIDERATIONS**

Empty all containers using a two stage pumping system or draining until no free liquid remains  
Minimize release to the environment.

## **14 TRANSPORT INFORMATION**

In case of accidental spillage or fire during transport, refer to instructions given under points 5, 6, 7 and 8 above.

### 14.1 UNO

# Firmenich

## Safety Data Sheet

According to Regulation (EC) No 1907/2006 (as amended)

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UN-No: 1197  
Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID  
Class: 3  
Packing Group: III  
Hazardous to the Environment

### 14.2 Land transport (ADR/RID)

UN-No: 1197  
Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID  
Class: 3  
Packing group: III

### 14.3 Sea transport (IMDG-Code)

UN-No: 1197  
Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID  
Class: 3  
Packing group: III  
Marine pollutant

### 14.4 Air transport (ICAO-IATA)

UN-No: 1197  
Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID  
Class: 3  
Packing group: III

## **15 REGULATORY INFORMATION**

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

#### **NFPA Hazard Classification**

Health: 2  
Flammability: 2  
Reactivity: 0

This mixture contains no toxic chemical or chemicals subject to reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 29 CFR Part 1910.1200.

### 15.2 Chemical Safety Assessment

No data available at this time.

## **16 OTHER INFORMATION**

### 16.1 Revisions

01-Dec-2010: Version 1.0 - First version validated for publication

### 16.2 Key literature references



# Firmenich

## Safety Data Sheet

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RIFM database  
OECD SIDS  
EU IUCLID  
Supplier information

### 16.3 Risk & Safety Phrases used under section 2

R10	Flammable.
R38	Irritating to skin.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
S16	Keep away from sources of ignition - No smoking.
S24/25	Avoid contact with skin and eyes.
S37	Wear suitable gloves.
S57	Use appropriate container to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instructions/Safety data sheets.
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P235	Keep cool.
P240	Ground/bond container and receiving equipment.
P241	Use rated explosion-proof electrical equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
P331	Do NOT induce vomiting.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use appropriate fire extinguishers for fire control.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

### 16.4 Risk Phrases used under section 3

R10	Flammable.
R38	Irritating to skin.

# Firmenich

## Safety Data Sheet

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R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

**We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Firmenich, it is the user's obligation to determine conditions of safe use of the product.**

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