

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

**052312 A**  
ARTIFICIAL STRAWBERRY FLAVOR  
© Firmenich product

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

Ingredient for use in products that may be ingested.  
Not for personal use in this form or concentration.  
Intended to be used in the manufacture of products for consumers.

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

**Mr. Thomas Sulich**  
Firmenich Inc.  
P.O. Box 5880  
Princeton - New Jersey 08543 - USA  
thomas.sulich@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

According to Regulation HCS 2012

Flammable Liquid - Cat. 3	H226
Skin Irritation - Cat. 2	H315
Skin Sensitization - Cat. 1	H317
Eye Damage - Cat.1	H318
WARNING: CONTAINS VOLATILE FLAVORING CHEMICALS; BREATHING THESE CHEMICALS IN THE WORKPLACE MAY LEAD TO SEVERE LUNG DAMAGE.	USH99 7

#### Additional information

Full text of listed statements : See section 16

#### 2.2 Label elements

**Hazard pictograms:**

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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



### Signal Word:

Danger

### Hazard Statements:

H318	Causes serious eye damage.
H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

### Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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.
P240	Ground/bond container and receiving equipment.
P241	Use rated explosion-proof electrical equipment.

### 2.3 Other hazards

WARNING: CONTAINS VOLATILE FLAVORING CHEMICALS; BREATHING THESE CHEMICALS IN THE WORKPLACE MAY LEAD TO SEVERE LUNG DAMAGE.

No data available at this time.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

The exact percentage (concentration) of composition has been withheld as a trade secret.

### 3.2 Mixture

Mixture of aromatic substances.

Contains :

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

$\geq 7.5 < 10.0\%$   
3(2h)-Furanone, 4-Hydroxy-2,5-Dimethyl-  
N° CAS : 0003658-77-3  
N° EINECS: 222-908-8

Classification: Xn - R22  
GHS Classification:  
Acute Toxicity (oral) - Cat. 4 [H302]

$\geq 5.0 < 7.5\%$   
3-Hexen-1-ol, (Z)-  
N° CAS : 0000928-96-1  
N° ELINCS: --

Classification: Xi - R36,R10  
GHS Classification:  
Eye Irritation - Cat.2A [H319]  
Flammable Liquid - Cat. 3 [H226]

$\geq 2.5 < 5.0\%$   
2-Propenoic Acid, 3-Phenyl-, Methyl Ester  
N° CAS : 0000103-26-4  
N° EINECS: 203-093-8

Classification: Xi - R43  
GHS Classification:  
Skin Sensitization - Cat. 1B [H317]

$\geq 1.0 < 2.5\%$   
Butanoic Acid, 2-Methyl-  
N° CAS : 0000116-53-0  
N° EINECS: 204-145-2

Classification: C - R21/22,R34  
GHS Classification:  
Skin Corrosion - Cat. 1C [H314]  
Eye Damage - Cat.1 [H318]  
Acute Toxicity (oral) - Cat. 4 [H302]  
Acute Toxicity (dermal) - Cat. 4 [H312]

$\geq 1.0 < 2.5\%$   
Acetic Acid  
N° CAS : 0000064-19-7  
N° EINECS: 200-580-7

Classification: C - R35,R10  
GHS Classification:  
Skin Corrosion - Cat. 1A [H314]  
Eye Damage - Cat.1 [H318]  
Flammable Liquid - Cat. 3 [H226]

$\geq 1.0 < 2.5\%$   
Hexanoic Acid  
N° CAS : 0000142-62-1  
N° EINECS: 205-550-7

Classification: C - R34  
GHS Classification:  
Skin Corrosion - Cat. 1C [H314]  
Eye Damage - Cat.1 [H318]

$\geq 0.1 < 0.5\%$   
2-Butanone, 3-Hydroxy-  
N° CAS : 0000513-86-0  
N° EINECS: 208-174-1

Classification: - R10  
GHS Classification:  
Flammable Liquid - Cat. 3 [H226]  
WARNING: CONTAINS VOLATILE FLAVORING CHEMICALS; BREATHING THESE CHEMICALS IN THE WORKPLACE MAY LEAD TO SEVERE LUNG DAMAGE. [USH997]

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

$\geq 0.1 < 0.5\%$

2-Hexenal, (E)-

N° CAS : 0006728-26-3

N° EINECS: 229-778-1

Classification: Xn N - R43,R51/53,R21/22

GHS Classification:

Acute Toxicity (dermal) - Cat. 3 [H311]

Skin Sensitization - Cat. 1B [H317]

Acute Toxicity (oral) - Cat. 4 [H302]

Environmental Hazard (chronic) - Cat. 2 [H411]

Flammable Liquid - Cat. 3 [H226]

### **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. Individuals showing evidence of inhalation exposure should be taken to an uncontaminated area. Obtain medical advice immediately.

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.

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

### **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.

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.

#### 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.

#### 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.

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

### **8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1 Control parameters

0000064-19-7 : ACETIC ACID (All forms)

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL)  
(2010-SEP)

STEL (1994-JUN) : 15 ppm , 15 minutes (All forms)  
STEL (1994-JUN) : 37 mg/m<sup>3</sup> , 15 minutes (All forms)  
TWA (1994-JUN) : 10 ppm , 10 hours (All forms)  
TWA (1994-JUN) : 25 mg/m<sup>3</sup> , 10 hours (All forms)

0000064-19-7 : Acetic acid (All forms)

American Conference of Governmental Industrial Hygienists (ACGIH) - Threshold Limit Values (TLV)  
(1994-SEP)

STEL (1994-SEP) : 15 ppm , 15 minutes (All forms)  
STEL (1994-SEP) : 37 mg/m<sup>3</sup> , 15 minutes (All forms)  
TWA (1994-SEP) : 10 ppm , 8 hours (All forms)  
TWA (1994-SEP) : 25 mg/m<sup>3</sup> , 8 hours (All forms)

0000064-19-7 : Acetic acid (All forms)

Occupational Safety and Health Administration (OSHA) (29 CFR 1910.1000 Z-1-A) - Permissible Exposure  
Limits - 1989 vacated values (1989-MAR)

TWA (1989-MAR) : 10 ppm , 8 hours (All forms)  
TWA (1989-MAR) : 25 mg/m<sup>3</sup> , 8 hours (All forms)

0000064-19-7 : Acetic acid (All forms)

Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1001 to 1910.1048 - Substance-  
Specific Standards (1993-JUN)

TWA (1993-JUN) : 10 ppm , 8 hours (All forms)  
TWA (1993-JUN) : 25 mg/m<sup>3</sup> , 8 hours (All forms)

#### 8.2 Exposure controls

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

#### Appropriate engineering controls

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

#### Environmental exposure controls

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

#### Personal protection

Respiratory protection: Breathing of the vapors or dust particles may be hazardous. In the absence of appropriate engineering controls such as spot ventilation, ventilated enclosures, etc., workers should avail themselves of the appropriate NIOSH approved respiratory protection.

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.

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

### **9 PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1 Information on basic physical and chemical properties

Appearance :	LIQUID
Colour :	COLOURLESS TO PALE YELLOW
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) :	= 126 Fahrenheit (= 52 Centigrade)
Evaporation rate :	Not available
Flammability (solid/gas) :	Not available
Upper/lower flammability or explosive limits :	
Vapor pressure (At 20°C in mm Hg ) :	
Calculated vapor pressure (At 20°C in mm Hg):	1.8
Vapour density :	Not available
Relative density (d 20/20) :	1.059 - 1.069
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:	27%

### **10 STABILITY AND REACTIVITY**

#### 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.

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

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 mixture has not been subjected to toxicological testing as an entity. According to available data on the constituents the health classification criteria are met.

## 12 ECOLOGICAL INFORMATION

This mixture has not been subjected to ecotoxicological testing as an entity. According to available data on the constituents the environmental classification criteria are not met.

## 13 DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product: The product should be handled according to the instructions given under sections 6, 7 and 8. Dispose of according to local or national regulations. The product should not be allowed to enter drains or the environment.

Contaminated packaging: Empty packaging should be disposed according to local or national regulations by an approved waste handling

## 14 TRANSPORT INFORMATION

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

### UNO

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

### Land transport (ADR/RID)

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

### Sea transport (IMDG-Code)

UN-No: 1197  
Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID



# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

Class: 3  
Packing group: III

### 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**

### Revisions

01-Dec-2010: Version 6.1 - First version validated for publication  
04-May-2012: Version 6.2 - Updates to sections 1, 2, 3, 8.3, 11, 12, 16.  
20-Apr-2013: Version 6.3 - Updates to sections 1, 2, 3, 8.1, 14, 16.  
07-July-2014: Version 6.4- Updates to section 2, 3, 14, 16.  
30-May-2015: Version 6.5- Updates to section 2, 3, 7, 8, 9,13,14,16

### Key literature references

RIFM database  
OECD SIDS  
EU IUCLID  
Supplier information

### Full text of phrases used under section 2

S16 Keep away from sources of ignition - No smoking.  
S24/25 Avoid contact with skin and eyes.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S37 Wear suitable gloves.

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

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

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
USH997	WARNING: CONTAINS VOLATILE FLAVORING CHEMICALS; BREATHING THESE CHEMICALS IN THE WORKPLACE MAY LEAD TO SEVERE LUNG DAMAGE.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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.
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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P310	Immediately call a POISON CENTER or doctor/physician.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P370+P378	In case of fire: Use appropriate fire extinguishers for fire control.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P235	Keep cool.

### Full text of phrases used under section 3

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
USH997	WARNING: CONTAINS VOLATILE FLAVORING CHEMICALS; BREATHING THESE CHEMICALS IN THE WORKPLACE MAY LEAD TO SEVERE LUNG DAMAGE.
R10	Flammable.
R21/22	Harmful in contact with skin and if swallowed.
R22	Harmful if swallowed.
R34	Causes burns.
R35	Causes severe burns.
R36	Irritating to eyes.
R43	May cause sensitization by skin contact.

---

# Firmenich

## Safety Data Sheet

According to Regulation HCS 2012

---

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

---

R51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**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.**

**Information contained in this document and related material is proprietary to Firmenich. Disclosure to third parties without the prior written consent of Firmenich except where required by applicable laws and regulations and/or reverse engineering are strictly prohibited.**