

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

050001 106478

NATURAL & ARTIFICIAL FLAVOR (COGNAC TYPE)

© 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.

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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. 1

H224

Eye Irritation - Cat.2

H319

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

USH99
7

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

Symbols:

F Highly flammable

Risks Phrases:

R11 Highly flammable.

2.1.3 Additional information

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

2.2 Label elements

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Hazard pictograms:



Signal Word:

Danger

Hazard Statements:

H224 Extremely flammable liquid and vapour.
H319 Causes serious eye irritation.

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:

Ethyl Acetate
Ethyl Formate
Iso-Butanol
Propanal

2.3 Other hazards

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

3 COMPOSITION/INFORMATION ON INGREDIENTS

Mixture of aromatic substances.

Contains :

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| | |
|------------|--|
| 2.5 - 5.0% | ethyl acetate N° CAS : 0000141-78-6 / N° EINECS: 205-500-4 Classification: F Xi - R36,R67,R66,R11 GHS Classification: Eye Irritation - Cat.2 Specific Target Organ Toxicity - Single Exposure - Cat. 3 Narcotic Effects |
| 2.5 - 5.0% | ethyl formate N° CAS : 0000109-94-4 / N° EINECS: 203-721-0 Classification: F Xn - R20/22,R36/37,R11 GHS Classification: Acute Toxicity (inhalation) - Cat. 4 Acute Toxicity (oral) - Cat. 4 Eye Irritation - Cat.2 Specific Target Organ Toxicity - Single Exposure - Cat. 3 Respiratory Irritation |
| 1.0 - 2.5% | iso-butanol N° CAS : 0000078-83-1 / N° EINECS: 201-148-0 Classification: Xi - R37/38,R41,R67,R10 GHS Classification: Eye Damage - Cat.1 Skin Irritation - Cat. 2 Specific Target Organ Toxicity - Single Exposure - Cat. 3 Narcotic Effects Specific Target Organ Toxicity - Single Exposure - Cat. 3 Respiratory Irritation |
| 1.0 - 2.5% | 1-Butanol, 3-methyl- N° CAS : 0000123-51-3 / N° EINECS: 204-633-5 Classification: Xn - R37,R20,R10 GHS Classification: Acute Toxicity (inhalation) - Cat. 4 Specific Target Organ Toxicity - Single Exposure - Cat. 3 Respiratory Irritation |
| 0.1 - 0.5% | 2-furaldehyde N° CAS : 0000098-01-1 / N° EINECS: 202-627-7 Classification: T - R21,R23/25,R40,R36/37/38 GHS Classification: Acute Toxicity (inhalation) - Cat. 2 Acute Toxicity (oral) - Cat. 3 Acute Toxicity (dermal) - Cat. 4 Eye Irritation - Cat.2 Skin Irritation - Cat. 2 Specific Target Organ Toxicity - Single Exposure - Cat. 3 Respiratory Irritation Carcinogenicity - Cat. 2 |

4 FIRST-AID MEASURES

4.1 Description of first aid measures

General information:

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

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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). Vapors form explosive mixtures with air and may travel to a source of ignition and flash back.

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.

For emergency personnel:

Apply the same recommendations as section 6.1

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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:

Eliminate all sources of ignition. Leaking containers should be removed to a well ventilated area if possible to do safely. If not, dike around container to limit spread of spill, leak. If spill/leak is small, clean up with standard absorbents (sand, vermiculite, etc.). Wear rubber gloves. Avoid contact with skin. If skin contact occurs, wash liberally with soap and water. See Section VI above. If large leak/spill, call HAZMAT Team.

Vapors may cause vomiting and nausea. Wear appropriate respiratory protection.

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

0000141-78-6 : ETHYL ACETATE (All forms)

NIOSH Recommended Exposure Limits (1994-JUN)

TWA (1994-JUN) : 400 ppm, 10 hours (All forms)

TWA (1994-JUN) : 1400 mg/m³, 10 hours (All forms)

0000109-94-4 : ETHYL FORMATE (All forms)

NIOSH Recommended Exposure Limits (1994-JUN)

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TWA (1994-JUN) : 100 ppm , 10 hours (All forms)
TWA (1994-JUN) : 300 mg/m³ , 10 hours (All forms)

0000141-78-6 : Ethyl acetate (All forms)
ACGIH Threshold Limit Values (1996-MAY)
TWA (1996-MAY) : 400 ppm , 8 hours (All forms)
TWA (1996-MAY) : 1440 mg/m³ , 8 hours (All forms)

0000141-78-6 : Ethyl acetate (All forms)
OSHA Permissible Exposure Limits (1989-MAR)
TWA (1989-MAR) : 400 ppm , 8 hours (All forms)
TWA (1989-MAR) : 1400 mg/m³ , 8 hours (All forms)

0000141-78-6 : Ethyl acetate (All forms)
OSHA Permissible Exposure Limits, Table Z-1 Limits for Air Contaminants (1993-JUN)
TWA (1993-JUN) : 400 ppm , 8 hours (All forms)
TWA (1993-JUN) : 1400 mg/m³ , 8 hours (All forms)

0000109-94-4 : Ethyl formate (All forms)
ACGIH Threshold Limit Values (1994-SEP)
TWA (1994-SEP) : 100 ppm , 8 hours (All forms)
TWA (1994-SEP) : 303 mg/m³ , 8 hours (All forms)

0000109-94-4 : Ethyl formate (All forms)
OSHA Permissible Exposure Limits (1989-MAR)
TWA (1989-MAR) : 100 ppm , 8 hours (All forms)
TWA (1989-MAR) : 300 mg/m³ , 8 hours (All forms)

0000109-94-4 : Ethyl formate (All forms)
OSHA Permissible Exposure Limits, Table Z-1 Limits for Air Contaminants (1993-JUN)
TWA (1993-JUN) : 100 ppm , 8 hours (All forms)
TWA (1993-JUN) : 300 mg/m³ , 8 hours (All forms)

0000098-01-1 : Furfural (All forms)
ACGIH Threshold Limit Values (1996-MAY)
TWA (1996-MAY) : 2 ppm , 8 hours (All forms)
TWA (1996-MAY) : 7.9 mg/m³ , 8 hours (All forms)

0000098-01-1 : Furfural (All forms)
OSHA Permissible Exposure Limits (1989-MAR)
TWA (1989-MAR) : 2 ppm , 8 hours (All forms)
TWA (1989-MAR) : 8 mg/m³ , 8 hours (All forms)

0000098-01-1 : Furfural (All forms)
OSHA Permissible Exposure Limits, Table Z-1 Limits for Air Contaminants (1993-JUN)
TWA (1993-JUN) : 5 ppm , 8 hours (All forms)
TWA (1993-JUN) : 20 mg/m³ , 8 hours (All forms)

0000123-51-3 : ISOAMYL ALCOHOL (PRIMARY) (All forms)
NIOSH Recommended Exposure Limits (1994-JUN)
STEL (1994-JUN) : 125 ppm , 15 minutes (All forms)

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STEL (1994-JUN) : 450 mg/m³ , 15 minutes (All forms)
TWA (1994-JUN) : 100 ppm , 10 hours (All forms)
TWA (1994-JUN) : 360 mg/m³ , 10 hours (All forms)

0000078-83-1 : ISOBUTYL ALCOHOL (All forms)
NIOSH Recommended Exposure Limits (1994-JUN)
TWA (1994-JUN) : 50 ppm , 10 hours (All forms)
TWA (1994-JUN) : 150 mg/m³ , 10 hours (All forms)

0000123-51-3 : Isoamyl alcohol (All forms)
ACGIH Threshold Limit Values (1994-SEP)
STEL (1994-SEP) : 125 ppm , 15 minutes (All forms)
STEL (1994-SEP) : 452 mg/m³ , 15 minutes (All forms)
TWA (1994-SEP) : 100 ppm , 8 hours (All forms)
TWA (1994-SEP) : 361 mg/m³ , 8 hours (All forms)

0000123-51-3 : Isoamyl alcohol (primary and secondary) (All forms)
OSHA Permissible Exposure Limits (1989-MAR)
STEL (1989-MAR) : 125 ppm , 15 minutes (All forms)
STEL (1989-MAR) : 450 mg/m³ , 15 minutes (All forms)
TWA (1989-MAR) : 100 ppm , 8 hours (All forms)
TWA (1989-MAR) : 360 mg/m³ , 8 hours (All forms)

0000078-83-1 : Isobutyl alcohol (All forms)
ACGIH Threshold Limit Values (1994-SEP)
TWA (1994-SEP) : 50 ppm , 8 hours (All forms)
TWA (1994-SEP) : 152 mg/m³ , 8 hours (All forms)

0000078-83-1 : Isobutyl alcohol (All forms)
OSHA Permissible Exposure Limits (1989-MAR)
TWA (1989-MAR) : 50 ppm , 8 hours (All forms)
TWA (1989-MAR) : 150 mg/m³ , 8 hours (All forms)

0000078-83-1 : Isobutyl alcohol (All forms)
OSHA Permissible Exposure Limits, Table Z-1 Limits for Air Contaminants (1993-JUN)
TWA (1993-JUN) : 100 ppm , 8 hours (All forms)
TWA (1993-JUN) : 300 mg/m³ , 8 hours (All forms)

0000123-51-3 : Isomyl alcohol (primary and secondary) (All forms)
OSHA Permissible Exposure Limits, Table Z-1 Limits for Air Contaminants (1993-JUN)
TWA (1993-JUN) : 100 ppm , 8 hours (All forms)
TWA (1993-JUN) : 360 mg/m³ , 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.

8.2.1 Appropriate engineering controls

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

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8.2.2 Environmental exposure controls

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

8.3 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.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Appearance : | LIQUID |
| Colour : | BROWN |
| 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) : | = 61 Fahrenheit (= 16 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): | 27.4 |
| Vapour density : | Not available |
| Relative density (d 20/20) : | 0.962 - 1.01 |
| 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

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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

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

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14.2 Land transport (ADR/RID)

UN-No: 1197
Proper Shipping Name: EXTRACTS, FLAVOURING, LIQUID (VAPOUR PRESSURE AT 50°C MORE THAN 110 KPA)
Class: 3
Packing group: II

14.3 Sea transport (IMDG-Code)

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

14.4 Air transport (ICAO-IATA)

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

15 REGULATORY INFORMATION

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

NFPA Hazard Classification

Health: 2
Flammability: 3
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

RIFM database
OECD SIDS
EU IUCLID
Supplier information

16.3 Risk & Safety Phrases used under section 2

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| | |
|----------------|--|
| R11 | Highly flammable. |
| S16 | Keep away from sources of ignition - No smoking. |
| 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. |
| P264 | Wash thoroughly after handling. |
| 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. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P370+P378 | In case of fire: Use appropriate fire extinguishers for fire control. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

16.4 Risk Phrases used under section 3

| | |
|-----------|---|
| R10 | Flammable. |
| R11 | Highly flammable. |
| R20 | Harmful by inhalation. |
| R20/22 | Harmful by inhalation and if swallowed. |
| R21 | Harmful in contact with skin. |
| R23/25 | Toxic by inhalation and if swallowed. |
| R36 | Irritating to eyes. |
| R36/37 | Irritating to eyes and respiratory system. |
| R36/37/38 | Irritating to eyes, respiratory system and skin. |
| R37 | Irritating to respiratory system. |
| R37/38 | Irritating to respiratory system and skin. |
| R40 | Limited evidence of a carcinogenic effect. |
| R41 | Risk of serious damage to eyes. |
| R66 | Repeated exposure may cause skin dryness or cracking. |
| R67 | Vapours may cause drowsiness and dizziness. |

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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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