

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

586024 A
ARTIFICIAL CRANBERRY 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.
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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. 4 | H227 |
| Acute Toxicity (oral) - Cat. 4 | H302 |
| Skin Corrosion - Cat. 1C | H314 |
| Skin Sensitization - Cat. 1 | H317 |
| Eye Damage - Cat.1 | H318 |
| Carcinogenicity - Cat. 2 | H351 |
| Environmental Hazard (chronic) - Cat. 3 | H412 |

Additional information

Full text of listed statements : See section 16

2.2 Label elements

Hazard pictograms:

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Signal Word:

Danger

Hazard Statements:

| | |
|------|--|
| H314 | Causes severe skin burns and eye damage. |
| H302 | Harmful if swallowed. |
| H317 | May cause an allergic skin reaction. |
| H227 | Combustible liquid |
| H351 | Suspected of causing cancer. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary Statements:

| | |
|------|--|
| P201 | Obtain special instructions before use. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P264 | Wash thoroughly after handling. |
| P273 | Avoid release to the environment. |

2.3 Other hazards

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 :

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$\geq 20.0 < 30.0\%$

Benzyl Alcohol

N° CAS : 0000100-51-6

N° EINECS: 202-859-9

Classification: Xn - R20/22,R36

GHS Classification:

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

Acute Toxicity (inhalation) - Cat. 4 [H332]

Eye Irritation - Cat.2A [H319]

$\geq 5.0 < 7.5\%$

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]

$\geq 2.5 < 5.0\%$

Cyclohexanol, 5-Methyl-

2-(1-Methylethyl)-,

Acetate, [1r-

(1.Alpha.,2.Beta.,5.Alpha.)]

-

N° CAS : 0002623-23-6

N° EINECS: 201-911-8

Classification: N - R51/53

GHS Classification:

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

Flammable Liquid - Cat. 4 [H227]

$\geq 1.0 < 2.5\%$

Limonene

N° CAS : 0000138-86-3

N° EINECS: 205-341-0

Classification: Xn N - R38,R43,R50/53,R65,R10

GHS Classification:

Aspiration Hazard - Cat. 1 [H304]

Skin Sensitization - Cat. 1B [H317]

Skin Irritation - Cat. 2 [H315]

Environmental Hazard (acute) - Cat. 1 [H400]

Environmental Hazard (chronic) - Cat. 1 [H410]

Flammable Liquid - Cat. 3 [H226]

$\geq 1.0 < 2.5\%$

Benzyl Benzoate

N° CAS : 0000120-51-4

N° EINECS: 204-402-9

Classification: Xn N - R22,R51/53

GHS Classification:

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

Environmental Hazard (acute) - Cat. 1 [H400]

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

$\geq 0.5 < 1.0\%$

2-Furaldehyde

N° CAS : 0000098-01-1

N° EINECS: 202-627-7

Classification: T - R21,R23/25,R40,R36/37/38

GHS Classification:

Carcinogenicity - Cat. 2 [H351]

Acute Toxicity (oral) - Cat. 3 [H301]

Acute Toxicity (inhalation) - Cat. 2 [H330]

Acute Toxicity (dermal) - Cat. 4 [H312]

Specific Target Organ Toxicity - Single Exposure - Cat. 3 Respiratory Irritation

[H335]

Skin Irritation - Cat. 2 [H315]

Eye Irritation - Cat.2A [H319]

Flammable Liquid - Cat. 4 [H227]

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$\geq 0.5 < 1.0\%$
Isobutyric Acid
N° CAS : 0000079-31-2
N° EINECS: 201-195-7

Classification: C - R21/22,R34
GHS Classification:
Skin Corrosion - Cat. 1B [H314]
Eye Damage - Cat.1 [H318]
Acute Toxicity (dermal) - Cat. 3 [H311]
Acute Toxicity (oral) - Cat. 4 [H302]
Flammable Liquid - Cat. 4 [H227]

$\geq 0.1 < 0.5\%$
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]

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 advise immediately. Do not induce vomiting, obtain medical advise 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. Use standard procedures and preferred extinguishing media as stated below.

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Extinguishing media: Foam, carbon dioxide or dry chemical.

5.2 Special hazard arising from the substance or mixture

None.

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

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

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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

0000100-51-6 : Benzyl Alcohol (All forms)

American Industrial Hygiene Association (AIHA) - Workplace Environmental Exposure Levels (WEEL)
(1999-JAN)

TWA (1999-JAN) : 10 ppm , 8 hours (All forms)

0000098-01-1 : Furfural (All forms)

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

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

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

TWA (1993-JUN) : 5 ppm , 8 hours (All forms)

TWA (1993-JUN) : 20 mg/m³ , 8 hours (All forms)

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

American Industrial Hygiene Association (AIHA) - Workplace Environmental Exposure Levels (WEEL)
(1999-JAN)

TWA (1999-JAN) : 30 ppm , 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

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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 : 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) : = 165 Fahrenheit (= 74 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): 0.2
Vapour density : Not available
Relative density (d 20/20) : 1.016 - 1.036
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: 11%

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.

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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 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 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: | 1760 |
| Proper Shipping Name: | CORROSIVE LIQUID, N.O.S. (METHYLBUTYRIC ACID, 2-) |
| Class: | 8 |
| Packing Group: | III |

Land transport (ADR/RID)

| | |
|-----------------------|---|
| UN-No: | 1760 |
| Proper Shipping Name: | CORROSIVE LIQUID, N.O.S. (METHYLBUTYRIC ACID, 2-) |

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Class: 8
Packing group: III

Sea transport (IMDG-Code)

UN-No: 1760
Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (METHYLBUTYRIC ACID, 2-)
Class: 8
Packing group: III

Air transport (ICAO-IATA)

UN-No: 1760
Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (METHYLBUTYRIC ACID, 2-)
Class: 8
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

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| | |
|----------------|--|
| S23 | Do not breathe vapour. |
| 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. |
| S36/37 | Wear suitable protective clothing and gloves. |
| S61 | Avoid release to the environment. Refer to special instructions/Safety data sheets. |
| H227 | Combustible liquid |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H351 | Suspected of causing cancer /\$#GHS_ROE#\$/. |
| H412 | Harmful to aquatic life with long lasting effects. |
| P201 | Obtain special instructions before use. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P264 | Wash thoroughly after handling. |
| P273 | Avoid release to the environment. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P270 | Do not eat, drink or smoke when using this product. |
| P281 | Use personal protective equipment as required. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P330+P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| 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. |
| P391 | Collect spillage. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P363 | Wash contaminated clothing before reuse. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P308 | IF exposed or concerned: |

Full text of phrases used under section 3

| | |
|------|------------------------------|
| H226 | Flammable liquid and vapour. |
| H227 | Combustible liquid |

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| | |
|-----------|--|
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H311 | Toxic in contact with skin. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H351 | Suspected of causing cancer. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| R10 | Flammable. |
| R20/22 | Harmful by inhalation and if swallowed. |
| R21 | Harmful in contact with skin. |
| R21/22 | Harmful in contact with skin and if swallowed. |
| R22 | Harmful if swallowed. |
| R23/25 | Toxic by inhalation and if swallowed. |
| R34 | Causes burns. |
| R36 | Irritating to eyes. |
| R36/37/38 | Irritating to eyes, respiratory system and skin. |
| R38 | Irritating to skin. |
| R40 | Limited evidence of a carcinogenic effect. |
| 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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