

SAFETY DATA SHEET

In accordance with REACH Regulation EC No.1907/2006

Product: STRAWBERRY FLAVOURING S4300

Version: 4

Section 1. Identification of the substance or the mixture and of the supplier

1.1 Product Identifier

Product identifier: STRAWBERRY FLAVOURING S4300(Contains:4-Hydroxy-2,5-dimethyl-3(2H)-furanone)

Other identifiers: None

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

Product uses:

1.3 Details of the supplier of the safety data sheet

Company name: Irish Country Gold

Company address: Flavours and Essences UK Ltd.
Flavours House
Mercer Way
Shadsworth Business Park
Blackburn
BB1 2QD

Contact: Regulatory Affairs

E-Mail address:

Company phone: 0044 1 254 667447

1.4 Emergency telephone number

Emergency phone: 0044 1 254 667447

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Classification under Regulation (EC) No 1272/2008

Class and category of danger: Flammable Liquid, Hazard Category 3
Sensitization - Skin Category 1
H226, Flammable liquid and vapour.
H317, May cause an allergic skin reaction.

2.2 Label elements

Classification under Regulation (EC) No 1272/2008

Signal word: Warning

Hazard statements: H226, Flammable liquid and vapour.
H317, May cause an allergic skin reaction.

Supplemental Information: EUH208, Contains Geraniol, Linalool. May produce an allergic reaction.

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Precautionary statements: P210, Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P233, Keep container tightly closed.

P240, Ground/bond container and receiving equipment.

P241, Use explosion-proof electrical, ventilating and lighting equipment.

P242, Use only non-sparking tools.

P243, Take precautionary measures against static discharge.

P261, Avoid breathing vapour or dust.

P272, Contaminated work clothing should not be allowed out of the workplace.

P280, Wear protective gloves/eye protection/face protection.

P303/361/353, IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P333/313, If skin irritation or rash occurs: Get medical advice/attention.

P363, Wash contaminated clothing before reuse.

P370/378, In case of fire: Use carbon dioxide, dry chemical, foam for extinction.

P403/235, Store in a well-ventilated place. Keep cool.

P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

Pictograms:



2.3 Other hazards

Other hazards: Sensitisers declared on a CLP Hazard Label: Geraniol, Linalool
Hydrocarbon Concentration %: 0.0000%

Section 3. Composition / information on ingredients

3.2 Mixtures

Contains:

| Name | CAS | EC | REACH Registration No. | % | Classification for (CLP) 1272/2008 | Specific Conc. Limits, M-factors and ATEs |
|---------------------------------------|-----------|-----------|------------------------|---------|--|---|
| Ethyl butyrate | 105-54-4 | 203-306-4 | 01-2120118576-54-xxxx | 1-<5% | Flam. Liq. 3-Eye Irrit. 2; H226-H319,- | |
| Maltol | 118-71-8 | 204-271-8 | | 1-<5% | Acute Tox. 4;H302,- | oral: ATE = 1440 mg/kg bw |
| 4-Hydroxy-2,5-dimethyl-3(2H)-furanone | 3658-77-3 | 222-908-8 | | 0.1-<1% | Acute Tox. 4-Skin Corr. 1B-Eye Dam. 1-Skin Sens. 1A;H302-H314-H317,- | oral: ATE = 1608 mg/kg bw |

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| | | | | | | |
|----------|----------|-----------|--|---------|---|---------------------------|
| Geraniol | 106-24-1 | 203-377-1 | | 0.1-<1% | Skin Irrit. 2-Eye Dam. 1-Skin Sens. 1;H315-H317-H318,- | |
| Linalool | 78-70-6 | 201-134-4 | | 0.1-<1% | Skin Irrit. 2-Eye Irrit. 2-Skin Sens. 1B;H315-H317-H319,- | oral: ATE = 2790 mg/kg bw |

Substances with Community workplace exposure limits:

| Name | CAS | EC | REACH Registration No. | % | Classification for (CLP) 1272/2008 | Specific Conc. Limits, M-factors and ATEs |
|------------------|----------|-----------|------------------------|---------|---|---|
| Ethyl acetate | 141-78-6 | 205-500-4 | | 0.1-<1% | Flam. Liq. 2-Eye Irrit. 2-STOT SE 3;H225-H319-H336,EUH066 | |
| Propylene glycol | 57-55-6 | 200-338-0 | 01-2119456809-23-xxxx | 50-100% | -;-,- | |

Substances that are endocrine disruptors according to Regulation (EU) 2017/2100 or Regulation (EU) 2018/605, greater than 0.1%:

Not Applicable

Substances that are persistent, bioaccumulative and toxic or very persistent and very bioaccumulative, greater than 0.1%:

Not Applicable

Section 4. First-aid measures

4.1 Description of first aid measures

Inhalation: Remove from exposure site to fresh air, keep at rest, and obtain medical attention.

Eye exposure: Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.

Skin exposure: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

Ingestion: Rinse mouth with water and obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

None expected, see Section 4.1 for further information.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable media: Carbon dioxide, Dry chemical, Foam.

5.2 Special hazards arising from the substance or mixture

In case of fire, may be liberated: Carbon monoxide, Unidentified organic compounds.

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5.3 Advice for fire fighters:

In case of insufficient ventilation, wear suitable respiratory equipment.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid inhalation. Avoid contact with skin and eyes. See protective measures under Section 7 and 8.

6.2 Environmental precautions:

Keep away from drains, surface and ground water, and soil.

6.3 Methods and material for containment and cleaning up:

Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Contain spillage immediately by use of sand or inert powder. Dispose of according to local regulations.

6.4 Reference to other sections:

Also refer to sections 8 and 13.

Section 7. Handling and storage

7.1 Precautions for safe handling:

Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

7.3 Specific end use(s):

Use in accordance with good manufacturing and industrial hygiene practices.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits:

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| Ingredient | CAS | EC | Description | Value |
|------------------|----------|-----------|---|---------------------|
| Ethyl acetate | 141-78-6 | 205-500-4 | Long-term exposure limit (8-hour TWA) (ppm) | 200 |
| | | | Long-term exposure limit (8-hour TWA) (mg/m3) | 734 |
| | | | Short-term exposure limit (15-minute) (ppm) | 400 |
| | | | Short-term exposure limit (15-minute) (mg/m3) | 1468 |
| | | | Long-term exposure limit (8-hour TWA) Reference | UK EH40 Oct 2007 |
| | | | Long-term exposure limit (8-hour TWA) Updated | 04/01/2010 00:00:00 |
| | | | Short-term exposure limit (15-minute) Reference | UK EH40 Oct 2007 |
| | | | Short-term exposure limit (15-minute) Updated | 04/01/2010 00:00:00 |
| Propylene glycol | 57-55-6 | 200-338-0 | Long-term exposure limit (8-hour TWA) (ppm) | 150 |
| | | | Long-term exposure limit (8-hour TWA) (mg/m3) | 474 |
| | | | Long-term exposure limit (8-hour TWA) Reference | UK EH40 Oct 2007 |
| | | | Long-term exposure limit (8-hour TWA) Updated | 04/01/2010 00:00:00 |
| | | | Short-term exposure limit (15-minute) Reference | UK EH40 Oct 2007 |
| | | | Short-term exposure limit (15-minute) Updated | 04/01/2010 00:00:00 |

8.2 Exposure Controls

Eye / Skin Protection

Wear protective gloves/eye protection/face protection

Respiratory Protection

Ensure adequate and ongoing ventilation is maintained in order to prevent build up of excessive vapour and to ensure occupational exposure limits are adhered to. If appropriate, and depending on your patterns and volumes of use, the following engineering controls may be required as additional protective measures: a) 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. b) Employ the use of Personal protective equipment - an approved, properly fitted respirator with organic vapour cartridges or canisters and particulate filters. c) 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

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possible worker exposures. d) Use closed systems for transferring and processing this material.

Also refer to Sections 2 and 7.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Physical State/Colour: | Clear colourless to straw coloured liquid |
| Odour: | Typical strawberry odour |
| Odour threshold: | Not determined |
| Melting point / freezing point: | Not determined |
| Boiling point or initial boiling point and boiling range: | Not determined |
| Flammability: | Not determined |
| Lower and upper explosion limit: | Not determined |
| Flash point: | 53 °C |
| Auto-ignition temperature: | Not determined |
| Decomposition temperature: | Not relevant |
| pH: | Not determined |
| Kinematic viscosity: | Not determined |
| Solubility: | Not determined |
| Partition coefficient: n-octanol/water (log value): | Not determined |
| Vapour pressure: | Not determined |
| Density and/or relative density: | 1.0220 - 1.0420 |
| Relative vapour density: | Not determined |
| Particle characteristics: | Not determined |

9.2 Other information: None available

Section 10. Stability and reactivity

10.1 Reactivity:

Presents no significant reactivity hazard, by itself or in contact with water.

10.2 Chemical stability:

Good stability under normal storage conditions.

10.3 Possibility of hazardous reactions:

Not expected under normal conditions of use.

10.4 Conditions to avoid:

Avoid extreme heat.

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10.5 Incompatible materials:

Avoid contact with strong acids, alkalis or oxidising agents.

10.6 Hazardous decomposition products:

Not expected.

Section 11. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

This mixture has not been tested as a whole for health effects. The health effects have been calculated using the methods outlined in Regulation (EC) No 1272/2008 (CLP).

Acute Toxicity: Based on available data the classification criteria are not met.

Acute Toxicity Oral >5000

Acute Toxicity Dermal Not Applicable

Acute Toxicity Inhalation Not Available

Skin corrosion/irritation: Based on available data the classification criteria are not met.

Serious eye damage/irritation: Based on available data the classification criteria are not met.

Respiratory or skin sensitisation: Sensitization - Skin Category 1

Germ cell mutagenicity: Based on available data the classification criteria are not met.

Carcinogenicity: Based on available data the classification criteria are not met.

Reproductive toxicity: Based on available data the classification criteria are not met.

STOT-single exposure: Based on available data the classification criteria are not met.

STOT-repeated exposure: Based on available data the classification criteria are not met.

Aspiration hazard: Based on available data the classification criteria are not met.

Information about hazardous ingredients in the mixture

| Ingredient | CAS | EC | LD50/ATE Oral | LD50/ATE Dermal | LC50/ATE Inhalation | LC50 Route |
|------------|----------|-----------|---------------|-----------------|---------------------|---------------|
| Maltol | 118-71-8 | 204-271-8 | 1440 | Not available | Not available | Not available |

Refer to Sections 2 and 3 for additional information.

11.2 Information on other hazards

Not Applicable

Section 12. Ecological information

12.1 Toxicity: Not available

12.2 Persistence and degradability: Not available

12.3 Bioaccumulative potential: Not available

12.4 Mobility in soil: Not available

12.5 Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

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12.6 Endocrine disrupting properties: Not Applicable

12.7 Other adverse effects: Not available

Section 13. Disposal considerations

13.1 Waste treatment methods:

Dispose of in accordance with local regulations. Avoid disposing into drainage systems and into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport information

| | 14.1 UN number: | 14.2 UN Proper Shipping Name: | 14.3 Transport hazard class (es): | Sub Risk: | 14.4 Packing Group: |
|-----------------------------|------------------------|--------------------------------------|--|------------------|----------------------------|
| UN Model Regulations | UN1197 | EXTRACTS, LIQUID | 3 | - | III |
| IMDG | UN1197 | EXTRACTS, LIQUID | 3 | - | III |
| ADR,RID,ADN | UN1197 | EXTRACTS, LIQUID | 3 | - | III |
| ICAO TI | UN1197 | EXTRACTS, LIQUID | 3 | - | III |

14.5 Environmental hazards: Not environmentally hazardous for transport

14.6 Special precautions for user: None additional

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Not applicable

Section 15. Regulatory information

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

None additional

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

Section 16. Other information

Concentration % Limits: SS 1=16.67%

Total Fractional Values: SS 1=6.00

Key to revisions:

Concentration % Limits

Information about hazardous ingredients in the mixture

SECTION 3: Composition/information on ingredients

Total Fractional Values

Workplace exposure limits

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Key to abbreviations:

| Abbreviation | Meaning |
|--------------|--|
| Acute Tox. 4 | Acute Toxicity - Oral Category 4 |
| Eye Dam. 1 | Eye Damage Category 1 |
| Eye Irrit. 2 | Eye Irritation Category 2 |
| Flam. Liq. 3 | Flammable Liquid, Hazard Category 3 |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| 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. |
| P210 | Keep away from heat, sparks, open flames and hot surfaces. - No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical, ventilating and lighting equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P260 | Do not breathe vapour or dust. |
| P261 | Avoid breathing vapour or dust. |
| P264 | Wash hands and other contacted skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P301/312 | IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell. |
| P301/330/331 | If swallowed: Rinse mouth. Do not induce vomiting. |
| P302/352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303/361/353 | IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304/340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305/351/338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P330 | Rinse mouth. |
| P333/313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337/313 | If eye irritation persists: Get medical advice/attention. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P363 | Wash contaminated clothing before reuse. |
| P370/378 | In case of fire: Use carbon dioxide, dry chemical, foam for extinction. |
| P403/235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to approved disposal site, in accordance with local regulations. |

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| | |
|---------------|----------------------------------|
| Skin Corr. 1B | Skin Corrosion Category 1B |
| Skin Irrit. 2 | Skin Irritation Category 2 |
| Skin Sens. 1 | Sensitization - Skin Category 1 |
| Skin Sens. 1A | Sensitization - Skin Category 1A |
| Skin Sens. 1B | Sensitization - Skin Category 1B |

The information in this safety data sheet is to the best of our knowledge true and accurate but all data, instructions, recommendations and/or suggestions are made without guarantee.