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 OV20100

VALENCIA ORANGE OIL CP 1X 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) Nº 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:

| Xn N | Flammable Harmful Dangerous for the environment |
|--|--|
| Risks Phrases: | |
| R10 | Flammable. |
| R38 | Irritating to skin. |
| R43 | May cause sensitization by skin contact. |
| N Risks Phrases: R10 R38 | Dangerous for the environment Flammable. Irritating to skin. |

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

2.3 Other hazards

No data available at this time.

<u>3 COMPOSITION/INFORMATION ON INGREDIENTS</u>

Natural product.

Contains :

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

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

90.0 - 99.0% 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

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 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. 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.

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

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.

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 generals rules for compatibility storage.

7.3 Specific end use(s)

Not available at this time.

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

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

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

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 : Colour : Odour : | CLEAR LIQUID YELLOW TO ORANGE 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): | 1.1 |
| Vapour density : | Not available |
| Relative density (d 20/20) : | 0.841 - 0.851 |
| Water solubility (20°C) : | Not applicable |
| | |

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

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

| Partition coef. (n-octanol/water) : Auto-ignition temperature (°C): | Not applicable Not available |
|--|---------------------------------|
| Decomposition temperature : | Not available |
| Viscosity : | Not available |
| Explosive properties : | Not available |
| Oxidizing properties : | Not available |
| VOC Content less than: | 100% |

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.

<u>10.4 Conditions to avoid</u> 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

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

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

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: | III |
| Packing Group. | 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: | 111 |

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 Amendements and Reauthorization Act of 1986 and 29 CFR Part 1910.1200.

15.2 Chemical Safety Assessment

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

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

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

| R10 R38 R43 R50/53 | Flammable. Irritating to skin. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
|-----------------------------|--|
| R65 | Harmful: may cause lung damage if swallowed. |
| S16 S24/25 | Keep away from sources of ignition - No smoking. 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. |

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

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

| 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. |
| 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. |

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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