

Original Swiss Aromatics602 Freitas Pkwy
San Rafael, CA 94903**MATERIAL SAFETY DATA SHEET**

Essential Oil

ANGELICA ROOT German

Number of pages : 15

Created on : 15/09/2011

Tel: 415 479 9120

www.originalswissaromatics.com

contact@osapia.com

According to Article 31 of Regulation (EC) n°1907/2006

MSDS B055

Version 04.03

1 - IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**1.1 - Product identifier**

Trade name : **ANGELICA ROOT German Angelica**
Botanical name : **archangelica L.**
INCI name : **ANGELICA ARCHANGELICA ROOT OIL**
N°CAS TSCA : **8015-64-3**
N°CAS EINECS : **84775-41-7**
N°EINECS (n°EC) : **283-871-1**
N°CoE : **56n**
N°FEMA : **2088**

1.2 - Relevant identified uses of the substance and uses advised againstUse of product : **Fragrance Raw Material****1.3 - Details of the supplier**

Name supplier : **Original Swiss Aromatics** Phone : **415 479 9120**
Contact : Fax : **415 479 0614**
Address : **602 Freitas Pkwy San Rafael CA 94903** E-mail : **contact@osapia.com**

1.4 - Emergency telephone number


Information in the event of emergency: during the normal hours of opening (8h00 to 17h00) at 33 (0) .468.741.789, if not to emergency number ORFILA at 33(0) .145.42.59.59

2 - HAZARDS IDENTIFICATION**2.1 - Classification of the substance****2.1.1 - Classification according to Regulation (EC) n°1272/2008**

| Hazard class and Hazard category | Hazard Statement | |
|---|------------------|---|
| Flam. Liq. 3 (FL 3) | H226 | Flammable liquid and vapour. |
| Asp. Tox. 1 (AH 1) | H304 | May be fatal if swallowed and enters airways. |
| Skin Irrit. 2 (SCI 2) | H315 | Causes skin irritation. |
| Skin Sens. 1 (SS 1) | H317 | May cause an allergic skin reaction. |
| Aquatic Acute 1, Aquatic Chronic 1 (EH A1,C1) | H410 | Very toxic to aquatic life with long lasting effects. |

Classification procedure established according to the current IFRA* / IOFI* Labelling Manual and all ingredients classified according to Regulation (EC) n°1272/2008

2.1.2 - Classification according to Directive n°67/548/EECXn  Harmful

N  **Dangerous for environment**

R10 **Flammable**

R43 **May cause sensitisation 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**

2.1.3 - Additional information

CLP* classification system : According to Regulation (EC) n°1272/2008 and appendices, and the current version of IFRA* / IOFI* Labelling Manual.

DSD* classification system : According to Directive n°67/548/EEC, 1999/45/EC and appendices, and the current version of IFRA* / IOFI* Labelling Manual.

Information taken from specialist publications and information in the company's possession is also taken into account.

Other hazards :See the recommendations concerning the storage of classified products .

For the full text of risk phrases, hazard classes and categories, and H and EUH hazard statements, see section 16.

2.2 - Labelling elements

HAZARD PICTOGRAM(S)

HAZARD STATEMENT(S)



GHS02

H226 **Flammable liquid and vapour.**

H304 **May be fatal if swallowed and enters airways.**



GHS07

H315 **Causes skin irritation.**

H317 **May cause an allergic skin reaction.**



GHS08

H410 **Very toxic to aquatic life with long lasting effects.**



GHS09

SIGNAL WORD

Danger

PRECAUTIONARY STATEMENT(S)

P210 **Keep away from heat/sparks/open flames/hot surfaces. — No smoking.**

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.**

P501 **Dispose of contents/the container in accordance with current legislation.**

ADDITIONAL HAZARD INFORMATION(S)

Not regulated

2.3 - Other hazards

CMR* substances not requiring classification : **None**
See also section 11.6

Allergens (according to Cosmetic Directive 2003/15/EC) : **D-Limonene (5,00 to 10,00%)**

3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 - Type of product

Matter: NCS, Natural Complex Substance (100% pure and natural), Essential Oil.
Agro-alimentary Organic product certified by FR-BIO-01

3.2 - Dangerous ingredients

3.2.1 - Classification according to Regulation (EC) n°1272/2008

| | | |
|--|--|------------|
| N°CAS : 80-56-8 N°EINECS : 201-291-9 | Alpha pinene | <= 30,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Sens. 1, H317; Aquatic Acute 1, Aquatic Chronic 1, H410 | |
| N°CAS : 13466-78-9 N°EINECS : 236-719-3 | Delta 3 carene | <= 18,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Sens. 1, H317; Aquatic Chronic 2, H411 | |
| N°CAS : 555-10-2 N°EINECS : 209-081-9 | Beta phellandrene | <= 16,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304 | |
| N°CAS : 99-83-2 N°EINECS : 202-792-5 | Alpha phellandrene | <= 14,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304 | |
| N°CAS : 5989-27-5 N°EINECS : 227-813-5 | D-Limonene | <= 10,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Acute 1, Aquatic Chronic 1, H410 | |
| N°CAS : 123-35-3 N°EINECS : 204-622-5 | Myrcene | <= 10,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 3, H412 | |
| N°CAS : 13877-91-3 N°EINECS : 237-641-2 | Trans beta ocimene | <= 8,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304 | |
| N°CAS : 99-87-6 N°EINECS : 202-796-7 | Para cymene | <= 5,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 | |
| N°CAS : 3338-55-4 N°EINECS : 222-081-3 | Cis beta ocimene | <= 4,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304 | |
| N°CAS : 99-85-4 N°EINECS : 202-794-6 | Gamma terpinene | <= 4,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304 | |
| N°CAS : 99-86-5 N°EINECS : 202-795-1 | Alpha terpinene | <= 3,00 % |
| | Flam. Liq. 3, H226; Acute Tox. 4, H302; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 | |
| N°CAS : 79-92-5 N°EINECS : 201-234-8 | Camphene | <= 3,00 % |
| | Flam. Sol. 2, H228; Eye Irrit. 2, H319; Aquatic Acute 1, Aquatic Chronic 1, H410 | |
| N°CAS : 586-62-9 N°EINECS : 209-578-0 | Terpinolene | <= 3,00 % |
| | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 | |

3.2.2 - Classification according to Directive n°67/548/EEC

| | | |
|--|------------------------------|------------|
| N°CAS : 80-56-8 N°EINECS : 201-291-9 | Alpha pinene | <= 30,00 % |
| | N, Xn, R43, R50/53, R65 | |
| N°CAS : 13466-78-9 N°EINECS : 236-719-3 | Delta 3 carene | <= 18,00 % |
| | N, Xn, R10, R43, R51/53, R65 | |
| N°CAS : 555-10-2 N°EINECS : 209-081-9 | Beta phellandrene | <= 16,00 % |
| | Xn, R65 | |
| N°CAS : 99-83-2 N°EINECS : 202-792-5 | Alpha phellandrene | <= 14,00 % |
| | Xn, R65 | |
| N°CAS : 5989-27-5 N°EINECS : 227-813-5 | D-Limonene | <= 10,00 % |
| | N, Xi, R10, R38, R43, R50/53 | |
| N°CAS : 123-35-3 N°EINECS : 204-622-5 | Myrcene | <= 10,00 % |
| | Xn, R52/53, R65 | |
| N°CAS : 13877-91-3 N°EINECS : 237-641-2 | Trans beta ocimene | <= 8,00 % |
| | Xn, R65 | |
| N°CAS : 99-87-6 N°EINECS : 202-796-7 | Para cymene | <= 5,00 % |
| | N, Xn, R51/53, R65 | |
| N°CAS : 3338-55-4 N°EINECS : 222-081-3 | Cis beta ocimene | <= 4,00 % |
| | Xn, R65 | |
| N°CAS : 99-85-4 N°EINECS : 202-794-6 | Gamma terpinene | <= 4,00 % |
| | Xn, R65 | |
| N°CAS : 99-86-5 N°EINECS : 202-795-1 | Alpha terpinene | <= 3,00 % |
| | N, Xn, R22, R51/53, R65 | |
| N°CAS : 79-92-5 N°EINECS : 201-234-8 | Camphene | <= 3,00 % |
| | N, Xi, R36, R50/53 | |
| N°CAS : 586-62-9 N°EINECS : 209-578-0 | Terpinolene | <= 3,00 % |
| | N, Xn, R51/53, R65 | |

3.3 - Additional information

For the full text of risk phrases, safety phrases, hazard classes and categories, and H and EUH hazard statements, see section 16.

4 - FIRST AID MEASURES

4.1 - Description of first aid measures required

- Excessive inhalation** : Remove victim to fresh air. Keep them warm and allow them to rest quietly. If harmful effects persist or worsen, call a doctor. If patient is unconscious, place them in the lateral recovery position and call a doctor immediately. Make sure the area is well ventilated.
- Skin contact** : Rinse with plenty of water and change clothing if necessary. If irritation persists or if skin lesions of any kind appear, seek medical advice.
- Eye contact** : Rinse immediately with plenty of running water (minimum 2 litres), opening the eyes wide under the tap. If possible, lift the upper eyelid and rinse. If irritation persists or if skin lesions of any kind appear, consult an eye specialist, taking the product with you. If you wear contact lenses, rinse your eyes immediately. The lenses will probably fall out during rinsing. If not, remove them after rinsing. Do not put them back in. If you wear soft contact lenses, throw them away even if new. Hard contact lenses may be used again after proper cleaning by an eyecare professional. In all cases, do not wear contact lenses after the accident without the advice of an eye specialist.
- Ingestion** : Rinse the mouth out with water. Remove victim to fresh air. Keep them warm and allow them to rest quietly. Do not induce vomiting unless otherwise directed by a medical professional. If vomiting occurs spontaneously, keep head low down to prevent aspiration into the lungs. If harmful effects persist or worsen, call a doctor. If patient is unconscious, place them in the lateral recovery position and call a doctor immediately. Make sure the area is well ventilated.

In general, in case of doubt or if symptoms persist, ask for medical advice. Never give anything by ingestion to an unconscious person. Il est recommandé que ceux qui dispensent les premiers soins disposent d'un équipement de protection individuelle. Aucune initiative ne doit être prise qui implique un risque individuel ou en l'absence de formation appropriée.

4.2 - Most important, acute or delayed symptoms/effects

For further details regarding symptoms and effect on health, see section 11.

4.3 - Information regarding emergency medical care or special treatment

No special treatment necessary. Symptomatic treatment required. Contact a poison specialist immediately if large quantities have been ingested or inhaled.

5 - FIRE-FIGHTING MEASURES

5.1 - Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO₂) or powder fire extinguisher (ABC Classes), foam extinguisher.

Unsuitable extinguishing media : Direct jet of water.

5.2 - Special hazards arising from the substance

Possible production of toxic fumes under fire.

5.3 - Advice to fire-fighters

Avoid breathing in vapour or smoke emitted. Use a mask if necessary.

Do not attempt to fight the fire with water, which tends to feed rather than smother the flames. Essential oils have the ability to float on water and this causes the fire to propagate more quickly. To put out an essential oil-based fire in its early stages, use a specific ABC dry powder fire extinguisher (or equivalent). Small fires can be smothered by covering with earth, sand or a blanket.

6 - ACCIDENTAL RELEASE MEASURES

6.1 - Personal safety precautions, protective equipment and emergency procedures

Remove all possible ignition sources. Ventilate the premises. Do not smoke.

6.2 - Environmental protection precautions

Avoid contaminating the drainage system, surface water or ground water. Dispose of any contaminated cloths, sponges, etc. in accordance with the regulatory instructions in force.

6.3 - Containment and cleaning methods and equipment

Large spills must first be absorbed with inert material which must then be swept up and disposed of in accordance with the regulations in force.

6.4 - Reference to other sections

For personal protection, see section 8.

For waste disposal, see section 13.

7 - HANDLING AND STORAGE

7.1 - Precautions for safe handling

7.1.1 - Recommendations

- a) Personal precautions** : Avoid contact, do not inhale hot vapour, do not ingest, work under an extraction hood or arm. Evacuate all unnecessary personnel not wearing protective clothing. Do not touch or step in the spilled product. Ensure adequate ventilation. If the ventilation system is inadequate, wear an appropriate respiratory protection device.
- b) Incompatibilities** : Keep in original container or other approved container made from a compatible material and keep tightly closed when not in use. Do not reuse empty containers as they can hold product residues.
- c) Environment** : Avoid discharge into the environment. Work in containment area. Use an appropriate container to avoid contaminating the surrounding environment.

7.1.2 - Hygiene measures

It is forbidden to eat, drink or smoke in areas where this product is handled, stored or used. Personnel are recommended to wash their hands after using the product and remove contaminated clothing and protective equipment before entering eating or rest areas or toilets.

7.2 - Safe storage taking all incompatibilities into account

a) How to avoid creating :

- i) explosive atmospheres** : No risk at ambient temperature; observe ATEX* requirements.
- ii) corrosive conditions** : Store in stainless steel or amber glass containers if possible
- iii) a fire hazard** : Do not heat over a naked flame; do not expose the vapours to a naked flame or any other ignition source. Do not smoke while handling the product. During incorporation, the product must be kept at a relatively low temperature. If it is necessary to raise the temperature, this must be done with caution and for as short a time as possible.
- iv) storing with incompatible substances or mixtures** : Label according to the regulations in force, refer to chemical incompatibility table (INRS* -Storage and transfer of hazardous chemicals).
- v) evaporation conditions** : Store in closed containers protected from heat and light. Opened containers must be carefully reclosed and kept upright to avoid leakage.
- vi) potential ignition sources (including electrical equipment)** : Hot surfaces, naked flames, hot gases, mechanically produced sparks and ionizing radiation should be kept to a minimum or avoided completely. Have electrical equipment and wiring checked periodically by an approved electrician. Avoid static discharge by earthing your metal appliances. Protect electrical equipment from lightning by installing a lightning arrester.

b) How to control the effects of :

- i) weather conditions** : Do not store outside.
- ii) ambient pressure** : No known hazard.
- iii) temperature** : Store in a temperate area; to avoid drastic differences in temperature, insulate the facility as much as possible or store in a cold room.
- iv) solar radiation** : Store in opaque containers (preferably stainless steel or amber glass)
- v) humidity** : Store in properly closed containers.
- vi) vibration** : Store in strong, properly closed containers.

c) How to preserve the integrity of the substance using :

- i) stabilizers** : Store under a nitrogen blanket if possible.
- ii) antioxidants** : An antioxidant may be added; see regulations in force.

d) Other points :

- i) ventilation requirements** : See regulations in force. Good overall ventilation should be sufficient to limit the operator's exposure to molecules suspended in the air.
- ii) the specific design of storage rooms and tanks** : See regulations in force.
- iii) maximum storable quantities** : See regulations in force.
- iv) packaging compatibility** : Avoid PVC.

7.3 - Specific end use(s)

Comply with the regulations and product data sheet. No specific recommendations. Apply the above handling guidelines.

8 - EXPOSURE CONTROL - PERSONAL PROTECTION

8.1 - Control parameters

8.1.1 - Occupational exposure limits (INRS*, ND2098, Directive 91/322/EC and 200/39/EC)

Not regulated. No specific exposure limits for this product.

8.1.2 - Biological limit values (database of chemicals GESTIS: www.dguv.de)

Not regulated. No biological limit values established for this product.

8.1.3 - Recommended monitoring procedures

If this product contains ingredients involving exposure limits, it may be necessary to carry out regular tests on the atmosphere in the work area as well as on people and other living organisms, to determine the effectiveness of the ventilation, or other checks, or assess the need to use respirators. It is important to refer to European standard EN 689 which gives the methods for assessing exposure to chemical agents by inhalation and national general policy documents relating to the methods for determining dangerous substances.

8.1.4 - DNEL* (section 1.4 appendix I) / PNEC* (section 3.3 appendix I)

A chemical safety report (CSR) is not required according to the regulations. DNEL* and PNEC* are therefore not applicable to this product.

8.1.5 - Risk management measures according to used control banding approach (ICCT*)

If necessary refer to the website: www.ilo.org

| Task | Hazard band | Scale of use | Ability to become airborne | Control approach | Control Guidance Sheets |
|------|-------------|--------------|----------------------------|------------------|-------------------------|
| N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |

8.2 - Exposure control

8.2.1 - Appropriate technical control

Maintain concentration levels in the air below the occupational exposure limits defined in the standards.
Utilize localized extraction equipment.
Make use of mechanical handling equipment to reduce human contact with the products.

8.2.2 - Personal protection measures

- a) Eye and face protection:** : Protective glasses or goggles should be worn.
- b) Skin protection:** : Waterproof gloves that are resistant to essential oils and comply with an approved standard should be worn (nitrile rubber or polyvinyl alcohol (PVA)).
- c) Respiratory protection:** : Not generally necessary if the area is well ventilated (unless otherwise indicated).
- d) Heat exposure hazards** : Exposure to a heat flux from a fire or explosion can cause burns of varying degrees, depending on the distance from the heat source. It is essential to wear appropriate protective equipment as well as an autonomous respiratory protection device.

8.2.3 - Exposure control related to environmental protection

Comply with local environmental protection laws.

9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 - Information on physical and chemical properties

| | Value | Methods |
|---|---|----------------------------|
| a) Appearance | Liquid | internal |
| b) Color | Pale yellow to brown | internal |
| c) Odour | Aromatic, warm and herbaceous | internal |
| d) pH (20 °C) | Not applicable | / |
| e) Melting point | Not available | / |
| f) Initial boiling point and boiling range | Not available | / |
| g) Flash point | +43 °C | FD ISO/TR 11018 (vacuum) |
| h) Evaporation rate (butyl acetate = 1) | <= 1,0 | / |
| i) Flammability | Not available | / |
| j) Upper / lower flammability | Not available | / |
| k) Vapor pressure at 25 °C | Not available | / |
| l) Density of vapor (air = 1) | >= 1,0 | / |
| m) Relative density at 20 °C | 0,850 to 0,920 | NF ISO 279 |
| n) Solubilities | | |
| Solubility in water | Insoluble | / |
| Alcohol Solubility (20 °C in g/l) | Soluble | NF ISO 875 |
| o) Partition coefficient : n-Octanol/Water (log Po/w) | Not available | / |
| p) Auto ignition temperature | Not available | / |
| q) Decomposition temperature | Not available | / |
| r) Viscosity | Not available | / |
| s) Explosive properties | Lower limit : Not available Upper limit : Not available Explosion hazards : No risk at room temperature, comply to ATEX requirements. | / |
| t) Combustions properties | Does not contain any substance known to be susceptible to self-ignite | / |

9.2 - Other information

| | Value | Methods |
|--------------------------|---|------------|
| Refractive index at 20°C | 1,470 to 1,488 | NF ISO 280 |
| Optical rotation at 20°C | +5 ° to +41 ° | NF ISO 592 |
| Main ingredients | Alpha pinene (17,00 to 30,00%) Delta 3 carene (10,00 to 18,00%) Beta phellandrene (8,00 to 16,00%) Sabinene (3,00 to 14,00%) Alpha phellandrene (3,00 to 14,00%) D-Limonene (5,00 to 10,00%) | GC* |

10 - STABILITY AND REACTIVITY

10.1 - Reactivity

This product is shock-, vibration- and pressure-resistant under normal usage conditions.
Exposure to light or heat may cause oxidation.

10.2 - Chemical stability

No significant change in composition over time if the storage conditions described in paragraph 7.2 are observed.

10.3 - Possibility of dangerous reactions

None to our knowledge under normal usage conditions.

10.4 - Condition to avoid

Do not heat to a high temperature. Do not expose closed containers to direct sunlight. Keep away from ignition sources.

10.5 - Incompatible materials

P.V.C.

10.6 - Dangerous product decomposition

The product does not decompose under normal usage conditions.

11 - TOXICOLOGICAL INFORMATION

Hazards assessed using the methods described in Regulation (EC) No 1272/2008 and appendices for the case of complex natural substances and / or mixtures. They are also complemented by the RIFM* monographs, INRS* and IFRA*.

11.1 - Reactivity

a) Acute toxicity

| | Effect dose | Value | Methods | Remarks |
|-------------------|-------------|----------------|-------------------------------|---------|
| Oral ingestion | LD50 org. | >= 5 000 mg/kg | Oral ingestion in rats | / |
| Dermal absorption | LD50 derm. | >= 5 000 mg/kg | Dermal application in rabbits | / |
| Inhalation | LC50 | N.A. | / | / |

b) Skin corrosion / irritation

Causes skin irritation.

c) Serious eye damage / irritation

No significant effects or critical hazards.

d) Respiratory or skin sensitisation

May cause an allergic skin reaction.

e) Germ cell mutagenicity

No significant effects or critical hazards.

f) Carcinogenicity

No significant effects or critical hazards.

g) Toxicity for reproduction

No significant effects or critical hazards.

h) STOT - single exposure

| Single exposure | Specific effects | Affected organs | Remarks |
|---------------------------|------------------|-----------------|---------|
| Acute oral toxicity | N.A. | N.A. | / |
| Acute dermal toxicity | N.A. | N.A. | / |
| Acute inhalative toxicity | N.A. | N.A. | / |

i) STOT - repeated exposure

| Repeated exposure | Specific effects | Affected organs | Remarks |
|------------------------|------------------|-----------------|---------|
| Sub-acute oral | N.A. | N.A. | / |
| Sub-acute dermal | N.A. | N.A. | / |
| Sub-acute inhalative | N.A. | N.A. | / |
| Sub-chronic oral | N.A. | N.A. | / |
| Sub-chronic dermal | N.A. | N.A. | / |
| Sub-chronic inhalative | N.A. | N.A. | / |
| Chronic oral | N.A. | N.A. | / |
| Chronic dermal | N.A. | N.A. | / |
| Chronic inhalative | N.A. | N.A. | / |

j) Aspiration hazard

May be fatal if swallowed and enters airways.

11.2 - Information on the likely routes of exposure

No specific data.

11.3 - Symptoms related to physical, chemical and toxicological

No specific data.

11.4 - Delayed, immediate and chronic effects of short-and long-term

No specific data.

11.5 - Interactive effects

No specific data.

11.6 - Information on ingredients

CMR* : None

11.7 - Other information

This substance and/or some of its components are covered by the Code of Practice of the IFRA in effect, available on the internet website www.ifraorg.org

12 - ECOLOGICAL INFORMATION

12.1 - Toxicity

a) Danger to the aquatic environment according to Regulation (EC) n°1272/2008



Very toxic to aquatic life with long lasting effects.

b) Aquatic toxicity

| Aquatic toxicity | Effect dose | Exposure time | Results | Methods |
|------------------------|-------------|---------------|----------------|---------------------------|
| Acute fish toxicity | LC50 | 96h | N.A. | / |
| Acute daphnia toxicity | EC50 | 48h | 21,60 mg/l/48h | Acute immobilisation test |
| Acute algae toxicity | IC50 | 72h | N.A. | / |

c) Longterm-ecotoxicity

| Longterm-ecotoxicity | Effect dose | Exposure time | Results | Methods |
|--------------------------|-------------|---------------|---------|---------|
| Longterm fish toxicity | LC50 | N.A. | N.A. | / |
| Chronic daphnia toxicity | EC50 | N.A. | N.A. | / |

12.2 - Persistence and degradability

a) Abiotic degradation

| Half time | Evaluation | Methods | Remarks |
|-------------|------------|---------|---------|
| Sea-water | N.A. | / | / |
| Fresh water | N.A. | / | / |
| Air | N.A. | / | / |
| Soil | N.A. | / | / |

b) Biodegradation

| Degradation rate (%) | Temps | Evaluation | Méthodes | Remarques |
|----------------------|-------|------------|----------|-----------|
| N.A. | N.A. | N.A. | / | / |
| N.A. | N.A. | N.A. | / | / |

12.3 - Bioaccumulative potential

a) Partition coefficient n-octanol / water (log Ko/w)

| Value | Concentration | pH | °C | Methods | Remarks |
|-------|---------------|------|------|---------|---------|
| N.A. | N.A. | N.A. | N.A. | / | / |
| N.A. | N.A. | N.A. | N.A. | / | / |

b) Bioconcentration factor (BCF)

| Value | Species | Evaluation | Methods | Remarks |
|-------|---------|------------|---------|---------|
| N.A. | N.A. | N.A. | / | / |
| N.A. | N.A. | N.A. | / | / |

12.4 - Mobility in soil

a) Surface tension

| Value | °C | Concentration | Methods | Remarks |
|-------|------|---------------|---------|---------|
| N.A. | N.A. | N.A. | / | / |
| N.A. | N.A. | N.A. | / | / |

b) Adsorption / Desorption

| Transport | A/D coefficient Henry constant | log Koc | Volatility rate | Methods |
|--------------|--------------------------------|---------|-----------------|---------|
| Soil - Water | N.A. | N.A. | N.A. | / |
| Water-Air | N.A. | N.A. | N.A. | / |
| Soil-Air | N.A. | N.A. | N.A. | / |

12.5 - Results of PBT* and vPvB* assessment

To our knowledge, no such assessment has been carried out on this product to date.

12.6 - other adverse effects

Water hazardous class (WGK*) according to Annex 2 of the German directive Hazardous Materials (No. carac.: 814; 17.05.1999 organics materials): 2

13 - DISPOSAL CONSIDERATIONS

13.1 - Waste treatment methods

Do not discharge into drainage systems or watercourses.
Waste should be recycled or disposed of according to the legislation in force, preferably by an approved recycling or waste treatment company.
Do not pollute the soil or water; do not dispose of waste in the environment.
Empty containers completely. Do not remove labels. Use an approved waste disposal company.

13.2 - Additional information

The regulations relating to waste are codified in the French Environmental Code, according to Act No 2000-914 of 18 September 2000 relating to the legislative part of the Environmental Code. The text of Articles L. 541-1 to L. 541-50 is found in Book V (Prevention of pollution, risks and nuisances), Section IV (Waste), Chapter I (Waste disposal and materials recovery).

14 - TRANSPORT INFORMATION

Comply with international dangerous goods regulations in force.

14.1 - ADR*

Land transport ADR/RID (Ruling on transport of dangerous goods - road and train)



ADR/RID Class : 3
N° UN : 1169
Packing group : III
Dispatch Name : EXTRAITS AROMATIQUES LIQUIDES
Code Tunnel : A,B,C,D

14.2 - IMDG*

Maritime transport IMDG (Ruling on transport of dangerous goods)



IMDG Class : 3
N° UN : 1169
Packing group : III
Dispatch Name : EXTRACTS, AROMATIC, LIQUID
Marine pollutant : Yes

14.3 - IATA*

Air transport ICAO-TI and IATA-DGR



ICAO/IATA Class : 3
N° UN : 1169
Packing group : III
Dispatch Name : EXTRACTS, AROMATIC, LIQUID

14.4 - Specific precautions for the user

Guidelines on loading goods for carriage by road:

- See Table 7.5.2 of the ADR* for mixed loading prohibitions.
- Precautions relating to foodstuffs, other consumer goods and animal feed.
- During loading operations, smoking is prohibited in and around the vehicles.

- Check that the goods are properly secured in the vehicle.
- Check that the driver has the safety regulations and mandatory equipment if the limits defined by the ADR* are exceeded.

14.5 - Carriage in bulk in accordance with Appendix II of Marpol 73/78 and the IBC Code

Not applicable

14.6 - Additional information

Customs rate code : **3301 29 41 00**

Comment: The regulatory provisions given above are those in force when the data sheet was updated. However, since the regulations governing the carriage of hazardous substances are always subject to change, if the MSDS in your possession is more than 12 months old, you are advised to consult your safety adviser to ensure validity.

15 - REGULATORY INFORMATION

15.1 - Specific health, safety and environment regulations/legislation

a) Special provisions

Legislation relating to facilities classified for environmental protection purposes (ICPE) in France.

Table of occupational illnesses covered by Article R. 461-3 of the French labour code: Table No 84 -Conditions induced by liquid organic solvents used in the workplace.

b) Notes

The regulatory information given in this section is intended merely as a reminder of the main provisions that apply specifically to the product covered by the MSDS.

The original EU texts mentioned are updated and transcribed into national law.

You are recommended to refer to all local, national and international measures and provisions that might apply.

You are alerted to the possible existence of provisions other than those referred to in this document.

15.2 - Chemical safety assessment

To our knowledge, no such assessment has been carried out on this product to date.

16 - OTHER INFORMATION

a) Latest changes

The content of the MSDS is regulated by the article 31 of the Regulation (EC) n°1907/2006 (REACH).
This version has been completely updated according to the Regulation (EC) n°453/2010 of 20/05/2010.

MODIFICATION(S):

3) COMPOSITION / INFORMATION ON INGREDIENTS

=> Dangerous ingredients

9) PHYSICAL AND CHEMICAL PROPERTIES

=> Main ingredients

b) Abbreviations

ADR/RID : Agreement on Dangerous Goods by Road / Regulations concerning the Intl Transport of Dangerous Goods by Rail

ATEX : European explosive atmospheres directive

CLP : Classification Labelling Packaging

CMR : Carcinogenic, Mutagenic, Reprotoxic

DNEL : Derived No Effect Level

DSD : Dangerous Substances Directive

IATA-DGR : International Air Transport Association - Dangerous Goods Regulations

ICCT : Ilo Chemical Control Toolkit

ICAO-TI : International Civil Aviation Organization - Technical Instructions

IFRA : International Fragrance Association

IMDG : International Maritime Dangerous Goods

INRS : Institut National de Recherche et de Sécurité

IOFI : International Organization of the Flavor Industry

GC : Gas Chromatography

PBT : Persistent Bioaccumulating Toxicants

PNEC : Predicted No Effect Concentration

RIFM : Research Institute for Fragrance Materials

STOT : Specific Target Organ Toxicity

vPvB : Very Persistent and Very Bioaccumulative substance

WGK : Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)"

c) References

This Material Safety Data Sheet has been issued by the Health and Safety Regulations Department Of Golgemma SA and is in compliance with :

- Regulations (EC) n°453/2010 of 20 May 2010 and n°1272/2008 of 16 December 2008 amending Regulation (EC) n°1907/2006
- The IFRA* / IOFI* Labelling Manual of September 23, 2010
- The Directives 67/548/EEC and 1999/45/EC
- The Guidance on the compilation of Safety Data Sheet (ECHA - Draft October 2010)

d) Methods used in the assessment of data (Article 9 of Regulation (EC) n°1272/2008)

Classification established according to the current IFRA* / IOFI* Labelling Manual and all ingredients classified according to Regulation (EC) No 1272/2008.

e) List of risk phrases, safety phrases, classes and hazard categories, hazard statements and precautionary statements important

List of risk phrases (Directive n°67/548/EEC)

| | |
|--------|---|
| R10 | : Flammable |
| R22 | : Harmful if swallowed |
| R36 | : Irritating to eyes |
| R38 | : Irritating to skin |
| R43 | : May cause sensitisation 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 |
| R52/53 | : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R65 | : Harmful: may cause lung damage if swallowed |

List of safety phrases (Directive n°67/548/EEC)

| | |
|-----|--|
| S24 | : Avoid contact with skin |
| S37 | : Wear suitable gloves |
| S61 | : Avoid release to the environment. Refer to special instructions/safety data sheet |
| S62 | : If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label |

List of classes and categories of danger (Regulation (EC) n°1272/2008)

| | |
|------------------------------------|--|
| Flam. Liq. 3 | : Flammable liquid cat. 3 |
| Flam. Sol. 2 | : Flammable solid cat. 2 |
| Acute Tox. 4 | : Acute toxicity, oral cat. 4 |
| Asp. Tox. 1 | : Aspiration hazard cat. 1 |
| Skin Irrit. 2 | : Skin irritation cat. 2 |
| Eye Irrit. 2 | : Eye irritation cat. 2 |
| Skin Sens. 1 | : Skin sensitization cat. 1 |
| Aquatic Acute 1, Aquatic Chronic 1 | : Hazardous to aquatic environment - Acute hazard cat. 1 - Chronic hazard cat. 1 |
| Aquatic Chronic 2 | : Hazardous to aquatic environment - Chronic hazard cat. 2 |
| Aquatic Chronic 3 | : Hazardous to aquatic environment - Chronic hazard cat. 3 |

List of hazard (Regulation (EC) n°1272/2008)

| | |
|------|---|
| H226 | : Flammable liquid and vapour. |
| H228 | : Flammable solid. |
| H302 | : Harmful if swallowed. |
| H304 | : May be fatal if swallowed and enters airways. |
| H315 | : Causes skin irritation. |
| H317 | : May cause an allergic skin reaction. |
| H319 | : Cause serious eye irritation. |
| H410 | : Very toxic to aquatic life with long lasting effects. |

H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

List of precautionary statements (Regulation (EC) n°1272/2008)

P210 : Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
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.
P501 : Dispose of contents/the container in accordance with current legislation.

f) Advice on any appropriate training

Read the safety data sheet before using the product.

This MSDS complements the sheets in use, but does not replace them. The information it contains is based on the state of our knowledge about the product concerned at the time of update. They are given in good faith.

The attention of users is also drawn to the risks, if any, where a product is used for other purposes than those for which it was designed.

In no way is a user dispensed from knowing and applying the written regulations in the use of the product.

All regulatory requirements mentioned merely intend to help the user to fulfil their obligations when using a dangerous product.

This list should not be considered exhaustive. It does not dispense the user to ensure that no other obligations lie on him because of texts other than those cited and regulating the possession and use of the product, for which he alone is responsible.

Number of pages : 15

Created on : 15/09/2011

End of document