SAFETY DATA SHEET

Supplied in accordance with the provisions of:
Directive 91/155/EEC
Article 10 of Directive 88/379/EEC

1.1 Identity of substance: Essential oil of:

NEROLI Citrus aurantium *Linn.* **Sub species**: amara.

INCI name: Citrus amara (bitter orange flower extract)

CAS: 8016-38-4.[6]

FEMA: 2771[2. 6.]

1.2 Supplier: Ellisons 43 Bayton Road Coventry CV7 9EF 02476361619

2.0 Composition: The chemical composition of natural essential oils can be tremendously variable. An average composition for this material may be:
l-linalool 30%, l-linalyl acetate 7-15%. Numerous trace chemicals make up the remainder.

2.1 Physical data Appearance: A pale-yellow to amber liquid with a characteristically sweet, fresh, orange blossom fragrance.

Slightly soluble in **water.**

Solubility in ethyl **alcohol**: Minimum 70% required

Specific gravity: 0.85600 - 0.86900 @ 20.00 C

3.0 <u>Health hazard data</u>

3.1 Toxicity

Neroli oil was given GRAS status by FEMA[2] (1965)

Approved by the F.D.A.[3] for food use (§ 182.20).

Approved by the Council of Europe (1974) for food use with no restrictions. CE: 136n

This product must be stored out of the reach of children

3.2 Adverse skin reactions

Neroli oil (Tunisian) tested at 4% caused no irritation or sensitisation on humans. *Kligman A. 1975. Reports to the R.I.F.M*[1]*.*

3.3 Primary routes of exposure

Skin contact : YES

Inhalation : YES.

Eye contact : YES.

Skin absorption : NO

Ingestion : NO--(unless consumed)

3.3 Medical conditions aggravated by overexposure

Any pre-existing allergies to fragrance or other materials may be aggravated following exposure to this oil.

3.4 Effects of overexposure

(a) Eye contact effects : May be irritating to eyes.

(b) Skin contact effects : May be mildly irritating to skin.

(c) Inhalation effects : May be irritating if the vapour is excessively inhaled.

(d) Aspiration effects : May be harmful to the lungs if aspiration occurs.

(e) Ingestion effects : May be harmful if swallowed.

Suggested classification under CHIP regulations as per The British Essential Oil Association member recommendations.

Hazard symbol	Risk hazard	Hydrocarbon content	Safety phase
Xn	R.10, R65	40%	S62

(See 9.6 for explanation of symbols)

4.0 <u>First aid procedures</u>

4.1 EYE CONTACT : Flush immediately with cold milk if available, then flush with clean water for at least 15 minutes. **Contact a doctor or take the person to a casualty unit if problems persist.**

4.2 SKIN CONTACT Remove any contaminated clothing or shoes. Wash affected areas thoroughly with soap and water for at least 15 minutes. Flush continuously with cold water. Contact a doctor if necessary or take the person to a casualty unit.

4.3 INHALATION Remove from the exposure to fresh air. If breathing has stopped, administer artificial respiration and oxygen if available. **Contact a doctor or ring the emergency services.**

4.4 INGESTION Wash out the mouth with milk or water provided the person

is conscious. Do **not** induce vomiting. **Ring the emergency services immediately.**

5.0 Fire and explosion hazard

5.1 FLASH POINT 46 C. 115 F.

5.2 STORAGE **Keep away from heat and open flames.**

5.3 EXTINGUISHING MEDIA: Carbon Dioxide; Dry Chemical; Universal-Type Foam. **Do not use: Water.**

5.4 SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting fires involving essential oils or chemicals. Carbon monoxide and unidentified organic compounds may be formed during combustion.

6.0 Accidental release measures

6.1 Reactivity data: Chemically stable, but reduce oxygen exposure.

6.2 Conditions to avoid: This product presents no significant reactivity hazard. It is stable and will not react violently with water. Hazardous polymerisation will not occur.

6.3 Incompatibility with other materials: Avoid contact or contamination with strong acids, alkalis, or oxidising agents.

6.4 Hazardous combustion or decomposition products: Carbon monoxide and unidentified organic compounds may be formed during combustion.

6.5 Spill or leak procedures: Eliminate all ignition sources and ventilate the area. Contain spill and recover free product. Absorb remainder on vermiculite or other suitable absorbent material. Use of self-contained breathing apparatus is recommended for any major chemical spills. Prevent the liquid from entering the drains and sewers. Report spills to appropriate authorities if required.

6.6 Waste disposal methods : Place material and absorbent into sealed containers and dispose of in accordance with current applicable laws and regulation.

Note : Empty containers can have residues, gases and mists and are subject to proper waste disposal. **Do not incinerate closed containers.**

7.0 Handling, storage and special protection information

7.1 Store in a cool, dry place, away from sources of heat and ignition. Be cautious when handling with lifting equipment that the containers are not punctured.

7.2 PROTECTIVE GLOVES: The use of chemical resistant gloves is recommended, particularly when handling large volumes of this oil.

7.3 RESPIRATORY PROTECTION: Not generally required.

7.4 VENTILATION PROTECTION: Adequate ventilation is essential in confined spaces.

7.5 PROTECTIVE CLOTHING: Not generally required unless handling bulk oils in hot humid conditions.

7.6 EYE PROTECTION: Goggles or a face shield is recommended for bulk handling.

7.7 OTHER PROTECTIVE MEASURES: Avoid inhalation and contact with skin and eyes. Good personal hygiene practices should be used. Wash after any contact, before breaks and meals, and at the end of the work period.

8.0 Environmental and ecological information.

8.1 Biodegradability: Pure essential oils are extracted from plants and therefore will biodegrade in the same manner as plants.

8.2. Water course contamination: Since essential oils and similar extracts float on water, any spillage should not cause problems to fish. Micro organisms such as plankton may be killed, but ecological recovery will be swift. Evaporation and dispersion of the lighter fractions will be swift. Heavier fractions may remain for an undetermined period of time, Crustacean and Invertebrate contamination is possible.

If a major spillage occurred into a watercourse, harm could be caused to aquatic birds and aquatic mammals. Therefore **immediate measures to contain the spill are necessary and removal of such creatures from the area**. Cleaning of these creatures would be the same as for humans, i.e. the use of detergents to remove the oil and flushing with clean water.

9. Transport and Labelling information.

9.1 UN Number: 1993: Flammable Liquid N.O.S.

9.2 Land. Road, Railway: ARD/RID Class 3.3 NO 31d.c. Code 30 Ident: 1197 Label 3. Trem Card required with road transport of bulk oil.

9.3 Inland Waterways Mark with **'Flammable'** label, **'With Care'** and **'This way up'** labels.

9.4 Sea IMDG Page 3372 No 1197 Class 3.3 No:III Ident : 3-05 No GSMU 310, 313. U.K. IMO Mark with **'Flammable'** label. **'Stow away from heat'**. Flash point should be given.

9.5 Air No:ONU 1197 Class 3.3 Passenger 309 Freighter 310 (220L) Complete with 'hazard' labelling in accordance with IATA regulations.

9.6 Labelling Information:

In accordance with E.C.Directive, 4th Ammendment, Art 6.

Hazard Symbol : Xn. Hazard and Caution conditions apply. Label Xn.

R phase: R65-Harmful. May cause lung damage if swallowed. R10 Flammable.

S Phrase: S62-If swallowed do not induce vomiting. Seek medical attention immediately and show this container or label.

EINECS Number: 277-143-2 .[5]

10. Regulatory and other information.

10.1 EC Legislation: Council Directive of 27 July 1976 76/768/EEC Laws relating to Cosmetic Products. EC Directive, 4th Ammendment, Art.6 : labelling. EC Directive on Packaging and Packaging Waste.

10.2 UK Legislation : Health and Safety at Work Act 1974 and relevant Statutory Provisions. Management of Health and Safety at Work Regulations 1992, Control of Substances Hazardous to Health (COSHH) Regulations 1999. Chemical Information Packaging for Supply. (CHIP) 1994. The Cosmetics Products (Safety) Regulations 1996. Approved Guide to the Classification of substances and preparations dangerous for supply (2nd. Ed. 1993). CHJP-2. Chip-1999 Upgrade.

10.3 UK Further Information : The Weights and Measures (Cosmetic Products) Order 1994. General Code of Practise to COSHH Regulations, HSE.HS (G) 97 A Step By Step Guide to COSHH Regulations, HSE.HS(G) 65, Successful Health and Safety Management, HSE. The General Product Safety Regulations 1994 U.K.Packaging Waste Regulations. 1996

References

1. R.I.F.M. is the Research Institute for Fragrance Materials: Two University Plaza Suite 406 Hackensack, New Jersey 07601, USA. Tel: 201-488-5527 Fax: 201-488-5594
2. FEMA is the The Federal Emergency Management Agency, 500 C Street, SW Washington, D.C. 20472
3. F.D.A. is the Federal Drugs Administration USA. http://www.fda.gov/fdahomepage.html
4. Set 4 Plant Aromatics Safety data manuals by Martin Watt. http://www.aromamedical.demon.co.uk
5. EINECS is the European List of Notified Chemical Substances.
6. Allured's Flavor and Fragrance Materials 1999. ISBN 0-93170-64-2