Safety Data Sheet

In accordance with REACH Regulation EC No.1907/2006

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Neroli Essential Oil

CAS number: 8016-38-4

EC number: 639-655-8

Other names: Neroli Bigarade Oil, Citrus aurantium var. amara oil, Citrus aurantium Bigaradia oil, Orange Blossom Oil

INCI name: Citrus Aurantium Amara Flower Oil

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

Industrial use: Washing, cleaning and disinfecting products; detergents and maintenance products; metal surface treatment products.

Professional use: Washing, cleaning and disinfecting products; detergents and maintenance products; polishes and wax blends

Consumer use: washing and cleaning products; polishes and wax blends; cosmetics; biocides; air care products; tobacco products; cosmetics

1.3. Details of the supplier of the safety data sheet

Company name: Bath and Body Base Ltd
2A Laurel Way
Bishop Auckland
Co. Durham
DL14 7NF

Tel: 07493 064263

Email: technical@bathandbodybase.com

1.4. Emergency telephone number

Emergency tel: 07493 064263

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:
Flam. Liq. 3 – H226
Asp. Tox. 1 – H304
Skin Irrit. 2 – H315
Skin Sens. 1 – H317
Eye Irrit. 1 – H318
Aquatic Chronic 1 – H410

2.2. Label elements

Label elements labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard statements:
H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.

H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H410: Very toxic to aquatic life with long lasting effects.

Signal words: DANGER

Hazard pictograms:

GHS02 GHS07 GHS08

Precautionary statements (prevention):

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge
P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash hands thoroughly after handling. Do not touch eyes.
P273: Avoid release to the environment.
P280: Wear protective gloves/clothing/eye-protection/face protection.

Precautionary statements (response):

P370+P378: In case of FIRE: use carbon dioxide, dry sand, dry chemical or alcohol-resistant foam to extinguish.
P301+P310: IF SWALLOWED: Immediately call a poison centre or doctor
P331: DO NOT induce vomiting.
P332+P313: IF SKIN irritation or rash occurs: Get medical help.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower).
P305+P354+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337+P317: IF EYE irritation persists: Get medical help.
P363: Wash contaminated clothing before reuse.
P391: Collect spillage.

Precautionary statements (storage):

P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Precautionary statements (disposal):

P501: Dispose of contents/container in accordance with local/ regional/national/international regulations. Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

2.3. Other hazards

Other hazards:

All essential oils are highly concentrated so have strong aromas and colour that can stain.

Neroli oil contains over 11% Hydrocarbons (>30%). Emergency treatment for those who accidently swallow oils in this category is to seek medical attention immediately and transport sitting in a half-upright position.

Substance is not identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100

Substance does not meet the criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII.

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Section 3: Composition/information on ingredients

3.1. Chemical identity of the substance

Chemical identity: Essential oil of Citrus aurantium var. amara or Bigaradia (Rutaceae) obtained from the flowers by steam distillation

Common names(s), synonym(s): Neroli oil, Orange flower oil, Orange blossom oil

3.2. Substances

Mixture/Natural Complex Substance (NCS): This is a natural complex substance (NCS). The substance has a natural variability in its composition. It is obtained by steam distillation of the flowers of Citrus aurantium var amara.

Chemical Identity of ingredients:

Classification according to COMMISSION REGULATION (EU) 2017/542 of 22 March 2017 amending Regulation (EC) No 1272/2008

Major components of this natural complex substance are:

26 to 55% **Linalool** – CAS 78-70-6, EC 201-134-4: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319

3 to 20% **Linalyl acetate** – CAS 115-95-7, EC 204-116-4: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319

7 to 17% **Limonene** – CAS 5989-27-5, EC 227-813-5: Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

3 to 9% **(E)-β-Ocimene** – CAS 3779-61-1, EC 223-241-5: Flam. Liq. 3, H226; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 (other: respiratory); Aquatic Acute 1, H400; Aquatic Chronic 2, H411

2 to 8% **β-Pinene** – CAS 127-91-3, EC 204-872-5: Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic, 1 H410

2 to 8% **α -Terpineol** – CAS 98-55-5, EC 202-680-6: Skin Irrit. 2, H315; Eye Irrit. 2
H319

tr to 7% **Neryl acetate** – CAS 141-12-8; EC 205-459-2: Skin Sens. 1B, H317

1 to 5% **Geranyl acetate** – CAS 105-87-3, EC 203-341-5: Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 3, H412

0.5 to 5% **Nerolidol** – CAS 7212-44-4, EC 230-597-5: Skin Sens. 1B, H317; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

tr to 5% **Geraniol** - CAS 106-24-1, EC 203-377-1: Skin Irrit. 2, H315; Skin Sens.1, H317; Eye Dam. 1, H318

1 to 4% **β-Myrcene** - CAS 123-35-3, EC 204-622-5: Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 2, H411

0.5 to 4% **Farnesol** – CAS 4602-84-0, EC 225-004-1: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

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tr to 3% **Sabinene** – CAS 3387-41-5, EC 222-212-4: Acute Tox. 4, H302
tr to 2% **α -Pinene** – CAS 80-56-8, EC 201-291-9: Flam. Liq. 3, H226; Acute Tox 4, H302; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

0.5 to 2% **Nerol** – CAS 106-25-2, EC 203-378-7: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Dam. 1, H318

tr to 0.5% **Indole** – CAS 120-72-9, EC 204-420-7: Acute Tox. 4, H302; Acute Tox. 3, H311, Skin Sens. 1, H317; Eye Dam. 1, H318

Section 4: First aid measures

4.1. Description of first aid measures

General advice:	If health disorder happens, call for medical help immediately. Immediately remove any soiled clothing.
Skin contact:	Remove contaminated clothing and wash with water and soap the contaminated part - make sure you have eliminated the contamination - in case of complaints seek medical attention.
Eye contact:	Abundant eye-wash for 15 minutes with pure water, make sure you have eliminated the contamination, in case of complaints seek medical attention.
Swallowed:	Ask immediately medical assistance - mouth washing with water and do not provoke vomiting.
Inhalation:	Move to fresh air for at least 15 minutes, in case of complaints seek medical attention.
Self-protection of First Aider:	Use personal protective equipment as described in Section 8 if substance is present.

4.2. Most important symptoms and effects, both acute and delayed

Most important symptoms and effects:	May cause an allergic skin reaction Causes serious eye damage. May result in aspiration into the lungs causing chemical pneumonia.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate/special treatment:	No specific first aid measures noted

Section 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Suitable extinguishing media: water spray, carbon dioxide, dry chemical powder or appropriate / alcohol-free foam.
Unsuitable extinguishing media:	Pressurised water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:	May produce fumes of carbon monoxide and carbon dioxide, smoke and soot.

5.3. Advice for fire-fighters

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Advice for fire-fighters: Standard procedure for chemical fires - spray extinguishing media to base of flames. Avoid inhalation of smoke and fumes. In case of insufficient ventilation, wear suitable respiratory equipment. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus.

5.4. Emergency action code

Emergency action code: 3[Y] (Foam + BA & Fire Kit)

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: In an emergency (i.e. unintentional important release of the product in enclosed space) respiratory protection (Gas filter A, colour code brown: consider the maximum duration for wear) must be worn. Use insulating device for respiratory protection with an independent air supply in circumstances which are unclear - use adequate protections solvent resistant: security shoes, bodysuit, gloves and protective goggles (see Section 8).

For emergency responders: As per non-emergency personnel. Wear an appropriate NIOSH/MSHA approved respirator if mist, vapour or aerosol is generated.

Emergency procedures: remove any ignition source and ensure adequate ventilation in working areas following accidental releases.

6.2. Environmental precautions

Environmental precautions: Do not allow material to be released to the environment/surface and ground water/sewers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Keep away from heat, remove ignition sources and use non-combustible absorbing sawdust (sand, specific binder). Clean up spillage promptly. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations. Pick up and arrange disposal without creating mist/aerosol/excessive vapours. Keep in upright, suitable, closed containers for disposal.

6.4. Reference to other sections

Reference to other sections: Take hazard and precautionary phrases (Section 2) and Sections 7, 8 and 13 into account.

Section 7: Handling and storage

7.1. Precautions for safe handling

Protective measures: See point "Exposure controls/personal protection".
Safe handling: during handling keep original container closed - avoid contact with skin and eyes - wear adequate protective gloves protection and eye/face protection - avoid any sources of ignition - avoid exposing to high temperature during processing - maintain adequate local and general ventilation where product is handled.

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Advice on general occupational hygiene:	Wear appropriate protective clothing. Do not eat, drink or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage:	Keep container tightly closed in a cool, dry and well-ventilated place. Store only in unopened original receptacles. Provide solvent resistant, sealed floor. Store away from oxidizing agents and sources of ignition. Storage class: 3 Classification according to Betriebssicherheitsverordnung (BetrSichV): Flammable liquid Conditions: stored in a dry, aerated place, away from any heat source and ignition source. Temperature: from 5°C and 20°C.
Packaging:	Refer to Section 16 for safe packaging information.
Incompatibilities:	Refer to Section 10.

7.3. Specific end use(s)

Recommendations:	None specified (as per REACH dossier)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:	Not available.
Additional exposure limits under the conditions of use:	Not available.
DNEL/DMEL and PNEC-Values:	Not available.

8.2. Exposure controls

Engineering controls:	It is recommended that facilities storing or utilising this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Observe proper precautions regarding potential ignition sources. Handle and store in accordance with good industrial hygiene and safety practices. Wear appropriate PPE according to Directive 89/686/EEC.
PPE – General:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, using the bathroom and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
PPE – Eye/face:	Use protection goggles according to EN166.

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PPE – Skin:	Hand: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The quality of the protective gloves resistant to chemicals and the breakthrough time must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Other: Wear protective clothing according to that recommended by the risk assessment for the product's use.
PPE – Respiratory:	Respiratory protection may be required if excessive airborne contamination occurs.
Environmental exposure control:	Avoid discharge into the environment. Refer to additional information provided in Sections 6 and 7 regarding safe handling and storage to prevent exposure to individuals and/or to the environment. Refer to official regulations (local/government).

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	clear, mobile liquid
Colour:	pale yellow to yellow
Odour:	fresh, citric, floral
Relative density:	@ 20°C: 0.870 to 0.880
Refractive index:	@ 20°C: 1.465 to 1.472
Optical rotation:	@ 20°C: +2° to +11°
Solubility:	@ 25°C: range of solubilities for components = 2.012 and 3560 mg/L
Boiling point:	@ 101 325 Pa: boiling commences at 150°C
Vapour pressure:	@ 25°C: 25°C: 61.3 Pa (constituents range between 0.00525 and 536 Pa)
Freezing point:	@ 101 325 Pa: < -20°C
Flash point:	53.5°C (REACH value - Pensky Martens Closed Cup method)
Flammability:	The study does not need to be conducted because the substance is known to be stable in contact with air at room temperature for prolonged periods of time (days) and it does not contain metals or metalloids hence the classification procedure does not need to be applied.
Explosiveness:	The study does not need to be conducted because there are no chemical groups present that are associated with explosive properties.
Auto-ignition temperature:	@ 96.4 to 97.5 kPa: 244°C +/- 3°C
Kinematic viscosity:	No studies available (REACH dossier).
Partition coefficient n-octanol/water (log value):	LogKow range of constituents = 2.05 and 5.77.
Relative vapour density:	No studies available (REACH dossier).

9.2. Other information

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Information with regard to physical hazard classes:	Categories not relevant for the safe use of this substance.
Other safety characteristics:	Categories not relevant for the safe use of this substance.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: No classification.

10.2. Chemical stability

Chemical stability: Heating causes vaporisation and formation of ignitable atmosphere is possible.

10.3. Possibility of hazardous reactions

Hazardous reactions: Formation of explosive gas mixture with air possible. In case of unpropitious storing conditions (air admission, heat accumulation) self-ignition is possible for moistened solids (e.g. cloth, pulp, filter panel, binder).

10.4. Conditions to avoid

Conditions to avoid: Keep away from heat or flame. Use only in a well-ventilated area.

10.5. Incompatible materials

Materials to avoid: Oxidising agents, strong acids, strong alkalis.

10.6. Hazardous decomposition product

Haz. decomp. products: No dangerous decomposition products expected by intended use.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity, oral: GHS criteria not met. Neroli oil not tested itself but the only component classified for oral acute toxicity is classified category 4 and present at maximum 0.5% (REACH dossier)

Acute toxicity, inhalation: No studies available (REACH dossier).

Acute toxicity, dermal: No studies available (REACH dossier).

Eye irritation*:* Category 1 (irreversible effects on the eye) based on GHS criteria. No studies conducted on Neroli oil itself but two of its constituents (geraniol and nerol) are H318, the sum of their maximum concentrations > 3% concentration limit.

Skin irritation*:* Classified as Skin Irritant (Cat. 2) – no studies conducted on the oil itself but twelve of its components are H315 and the sum of their contents exceeds the CLP generic concentration limit of 10% for classification

Skin sensitivity: Classified as Skin Sensitiser (Cat 1) – no studies conducted on the oil itself but the max. concentration of linalool (Skin Sens. 1 - H317) exceeds the CLP generic concentration limit of 1% for classification

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Mutagenicity/carcinogenicity: GHS criteria not met. Not classified for mutagenicity/carcinogenicity. Salmonella typhimurium - Ames Test, OECD Guideline 471

Fertility/reproduction: No studies available (REACH dossier)

STOT-single exposure: data lacking (ECHA C&L)

STOT-repeated exposure: data lacking (ECHA C&L)

Aspiration hazard: Classified Asp. Tox. 1 – may cause lung damage if liquid enters airways (due to low viscosity of hydrocarbon content).

11.2. Information on other hazard classes which relates to endocrine disrupting properties

Other hazards: No information on other hazard classes specified.

Section 12: Ecological information

12.1. Toxicity

Fish: No studies available (REACH dossier).

Algae: 96h-EC50 = 0.766 – 0.877 mg/L. No study conducted on Neroli oil itself – prediction made using ECOSAR model based on constituents

Aquatic invertebrates: (Daphnia magna) 48h-EC50 = 0.445 – 0.465 mg/L. No study conducted on Neroli oil itself – prediction made using ECOSAR model based on constituents

Microorganisms: No studies available (REACH dossier).

Terrestrial arthropods: No studies available (REACH dossier).

12.2. Persistence and degradability

Persistence and degradability: Regarded as a readily biodegradable NCS. No study conducted on Neroli oil itself so estimate made based on components >89% constituents are readily biodegradable (REACH dossier)

12.3. Bioaccumulative potential

Bioaccumulative potential: The log Kow of the constituents ranges from 2.05 and 5.77 No specific data available for Neroli oil itself but not considered to be bioaccumulative

12.4. Mobility in soil

Mobility: With log Kow 4.38, limonene represents the group with a relatively high log Kow (Koc of limonene estimated at 2413). Most constituents may have a tendency to sorb to organic matter.

12.5. Results of PBT and vPvB assessment

PBT identification: The substance is not PBT/vPvB.

12.6. Endocrine disrupting properties

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Endocrine disrupting properties:	Neroli oil is not on the ED-list (https://edlists.org/the-ed-lists) of endocrine disruptors meaning that it is not a substance identified as an endocrine disruptor at EU level (List I), a substance under evaluation for endocrine disruption under an EU legislation (List II) nor a substance considered, by the evaluating National Authority, to have endocrine disrupting properties (List III)

12.7. Other adverse effects

Other adverse effects:	No information available (REACH dossier).

Section 13: Disposal considerations

13.1. Waste treatment methods

Product/packaging disposal:	Product: Recommendation: Recycling is preferred to disposal or burning. Disposal must be made according to official regulations. Must not be disposed together with household garbage. Do not allow product to reach sewage system. European waste catalogue: e.g. 02 03 03 wastes from solvent extraction. Uncleaned packaging: Recommendation: Empty contaminated packaging thoroughly. They may be recycled after thorough and proper cleaning. Packaging that may not be cleansed are disposed of in the same manner as the product. Contaminated solids: Recommendation: Moistened solids (e.g. cloth, pulp, filter panels, binder) can be burnt after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. European waste catalogue: e.g. 15 02 02 Filter and absorption materials contaminated with hazardous agents.
Waste treatment – relevant information:	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
Sewage disposal – relevant information:	Waste should not be disposed of by release to sewers.

13.2. Special precautions for landfill and incineration

Special precautions for landfill and incineration:	Waste is suitable for incineration.

Section 14: Transport information

UN number:	UN 1197
UN proper shipping name:	Extracts, liquid for flavouring or aroma
Transport hazard class(es):	3
Packaging group:	III

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Transport labels:

Environmental hazards: See section 2 - (IMDG - Marine pollutant)

Special precautions for user: Dangerous Goods Note - Product contains environmentally hazardous substances: d- limonene
Tunnel Restriction code: 3 (D/E)

Maritime transport in bulk according to IMO instruments: UN1197 - EXTRACTS, LIQUID for flavour or aroma Class 3 (Flammable liquids) - Packing group III
Marine pollutant

Section 15: Regulatory information

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

Specific regulations: The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716).

15.2. Chemical Safety Assessment

Chemical safety assessment: No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16: Other information

16.1. Other information

Packaging:

Type	Suitability
Glass	Yes
Steel	Yes
Aluminium	Yes
F/HDPE	Yes
Stainless steel drum	Yes

Shelf life: 36 months when stored within advised conditions, re-test every 12 months thereafter for a possible further 24 months.

Other information: * Indicates text in the SDS which has changed since the last revision.

Legal disclaimer: This information is provided for documentation purposes only.

The complete range of conditions or methods of use are beyond our control therefore we do not assume any responsibility and expressly disclaim any liability for any use of this product.

Information contained herein is believed to be true and accurate however, all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.

Compliance with all appropriate local regulations remains the responsibility of the user.

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technical@bathandbodybase.com

This safety sheet cannot cover all possible situations which the user may experience during processing.

Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary.

All health and safety information contained in this document should be provided to your employees or customers.

Bath and Body Base Ltd, 2A Laurel Way, Bishop Auckland, Co. Durham, DL14 7NF
technical@bathandbodybase.com