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:	Lemongrass Flexuosus Essential Oil
CAS number:	91844-92-7/8007-02-1
EINECS number:	943-552-6
Other names:	Traditional Cochin Lemongrass Oil
INCI name:	Cymbopogon Flexuosus Herb Oil

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

Industrial use:	Washing and cleaning products.
Professional use:	Washing and cleaning products; polishes and wax blends; oral care products, cosmetics.
Consumer use:	Air care products; biocides; polishes and wax blends; cosmetics; washing and cleaning products.

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]:	Asp. Tox. 1 – H304 Skin Irrit. 2 – H315 Skin Sens. 1B – H317 Eye Dam. 1 – H318 Aquatic Chronic 2 – H411

2.2. Label elements

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

Hazard statements:	H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H411: Toxic to aquatic life with long-lasting effects.
Signal words:	DANGER

Hazard pictograms:

GHS05 GHS07 GHS08 GHS09

Precautionary statements (prevention):	P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P264+P265: Wash hands thoroughly after handling. Do not touch eyes. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/clothing/eye-protection/face protection.
Precautionary statements (response):	P301+P316: IF SWALLOWED: Get emergency medical help immediately. P331: DO NOT induce vomiting. P302+P352: IF ON SKIN: wash with plenty of water. P333+P317: IF SKIN irritation or rash occurs: Get medical help. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P305+P317: IF IN EYES: Get emergency medical help. P391: Collect spillage.
Precautionary statements (storage):	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.

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

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

Section 3: Composition/information on ingredients

3.1. Chemical identity of the substance

Chemical identity:	Cymbopogon Flexuosus Oil
Common names(s), synonym(s):	Lemongrass 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 dried grass of Cymbopogon Flexuosus.
Chemical Identity of ingredients:	**Classification according to COMMISSION REGULATION (EU) 2017/542 of 22 March 2017 amending Regulation (EC) No 1272/2008**

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Major components of this natural complex substance are:

65 to 85% **Citral (Neral + Geranial)** – CAS 5392-40-5, EC 226-394-6: Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319

0.1 to 11% **(D & L) Limonene** – CAS 138-86-3, EC 205-341-0: 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 10% **Geraniol** – CAS 106-24-1, EC 203-377-1: Skin Irrit.2, H315; Skin Sens.1, H317; Eye Dam. 1, H318

tr to 6% **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 3% **β-Caryophyllene** – CAS 87-44-5, EC 201-746-1: Asp. Tox. 1, H304; Skin Sens. 1B, H317

0.5 to 3% **Camphene** – CAS 79-92-5, EC 201-234-8: Flam. Sol. 2, H228; Eye Irrit. 2, H319; Aquatic Chronic 1, H410

tr to 3% **Linalool** – CAS 78-70-6, EC 201-134-4: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319

tr to 3% **δ-Cadinene** – CAS 483-76-1, EC 866-559-5: Asp. Tox. 1, H304; Skin Irrit. 2, H315

tr to 3% **Methyl Heptanone** – CAS 110-93-0, EC 203-816-7: Flam. Liq. 3, H226

tr to 3% **iso-Geranial** – CAS 72203-98-6: not registered.

tr to 2.5% **Nonanone** – CAS 4485-09-0, EC 224-770-4: Eye Irrit. 2, H319

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

tr to 1.5% **Citronellol** – CAS 106-22-9, EC 203-375-0: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319

tr to 1% **Nerol** – CAS 106-25-2, EC 203-378-7: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Dam. 1, H318; Eye Irrit. 2, H319

tr to 1% **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

Section 4: First aid measures

4.1. Description of first aid measures

General advice: Immediately remove any clothing soiled by the product. Seek immediate medical advice. In case of unconsciousness place patient stably inside position for transportation. Seek immediate medical advice.

Skin contact: Immediately wash with water and soap and rinse thoroughly. Seek medical treatment.

Eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor. Seek immediate medical advice.

Swallowed: Drink plenty of water and provide fresh air. Call for a doctor immediately. Seek immediate medical advice.

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Inhalation: Supply fresh air and to be sure call for a doctor.

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: None specified (REACH dossier).

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

Immediate/special treatment: None specified (REACH dossier).

Section 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray, carbon dioxide, dry chemical powder or appropriate/alcohol-free foam.

Unsuitable extinguishing media: Full water jet.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for fire-fighters

Advice for fire-fighters: 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: Use personal protective equipment. Avoid saturated vapour/aerosol /mist formation. Avoid breathing vapour/aerosol/mist. Ensure adequate ventilation.

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

6.2. Environmental precautions

Environmental precautions: Do not allow material to be released to the environment (soil/surface - or ground water/drains/sewers). Inform respective authorities in case of seepage into water course or sewage system.

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6.3. Methods and material for containment and cleaning up

Clean-up procedures: Clean up spillage promptly. Provide adequate ventilation. Absorb with liquid binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralising agent. Treat with 2% sodium hydroxide solution. Keep in upright, suitable, closed containers for disposal and dispose of contaminated material as waste.

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: Avoid formation of mist and aerosols. Provide appropriate exhaust ventilation at places where mist/aerosols/excessive vapours are formed. Normal measures for preventive fire protection.

Advice on general occupational hygiene: Do not eat, drink and 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.

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

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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. 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. When using, do not eat, drink or smoke. Routinely wash work clothing and protective equipment to remove contaminants.
PPE – Eye/face:	Use protection goggles according to EN166.
PPE – Skin:	Hand: Chemical-resistant, impervious gloves complying with an approved standard (EN374) should be worn if handling substance. The selection of suitable gloves does not only depend on the material (penetration times, rates of diffusion and glove degradation) but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has should be checked prior to the application. The multichemical-resistant glove barrier 02-100 is recommended. Other: Wear protective clothing according to that recommended by the risk assessment for the product's use.
PPE – Respiratory:	Respiratory protection (using a suitable respiratory protective device) 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:	Yellow to brownish
Odour:	Characteristic lemon-like odour
Relative density (specific gravity):	@ 20°C: 0.869 to 0.904
Refractive index:	@ 20°C: 1.469 to 1.500
Optical rotation:	@ 20°C: -3.0° to +2.0°
Solubility:	@ 25°C: Water - range for constituents = 0.21 to 4364.1mg/l; in 70% ethanol = 1:3
Boiling point:	@101 325 Pa: 224°C
Vapour pressure:	@ 25°C: 26.66
Freezing point:	@101 325 Pa: < -20°C
Flash point:	>71°C (85.3°C Pensky Martens Closed Cup method – REACH dossier)
Flammability:	The study does not need to be conducted because the substance is known to be stable in contact with air and water 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.

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Explosiveness:	The study does not need to be conducted because there are no chemical groups present in the molecule which are associated with explosive properties.
Auto-ignition temperature:	@ 995.6 to 996.1 hPa: 240°C
Kinematic viscosity:	No data (REACH dossier).
Partition coefficient n-octanol/water (log value):	Log Kow range of the constituents = 2.06 to 6.64. 90.88% constituents have logKow ≤ 4
Relative vapour density:	No data (REACH dossier).

9.2. Other information

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 further relevant information available.

10.2. Chemical stability

Chemical stability: Thermal decomposition/conditions to be avoided: no decomposition if used according to specifications.

10.3. Possibility of hazardous reactions

Hazardous reactions: No dangerous reactions known.

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 known.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity, oral:	Not classified – LD50 (rat) > 5000mg/kg bw
Acute toxicity, inhalation:	No studies available (REACH dossier)
Acute toxicity, dermal:	Not classified – LD50 (rabbit) > 2000mg/kg bw
Eye irritation:	Corrosive. Studies inconclusive for lemongrass (BCOP assay) but classified as eye damaging (based on geraniol/H318).

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Skin irritation:	Skin Irritant (Cat. 2), H315 – based on Citral (rabbit, New Zealand White) – OECD Guideline 404.
Skin sensitivity:	Skin sensitiser (Cat 1B), H317 (Guinea Pig Maximisation Test, OECD 406 - sensitising).
Mutagenicity/carcinogenicity:	Not classified - Non-mutagenic (Ames Test, OECD 471, Salmonella typhimurium and Escherichia coli).
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

Classified Aquatic Chronic 2, H411

Fish:	No studies available (REACH dossier).
Algae:	Raphidocelis subcapitata: read-across studies from Litsea cubeba, Cymbopogon winterianus and Eucalyptus citriodora, 72h-ErL50 = 18, 34 and 25mg/L respectively. 72hr ErL10 (E. citriodora) = 12mg/L
Aquatic invertebrates:	Daphnia magna – read-across studies from Litsea cubeba, Cymbopogon winterianus and Eucalyptus citriodora, 48h-EL50 = 4.2, 20 and 6.0mg/L respectively.
Microorganisms:	No studies available (REACH dossier).
Terrestrial arthropods:	No studies available (REACH dossier).

12.2. Persistence and degradability

Persistence and degradability: Considered readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data (REACH dossier).

12.4. Mobility in soil

Mobility: No data (REACH dossier).

12.5. Results of PBT and vPvB assessment

PBT identification: The substance is not PBT/vPvB.

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12.6. Endocrine disrupting properties

Endocrine disrupting properties: Lemongrass Flexuosus 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: None specified (REACH dossier).

Section 13: Disposal considerations

13.1. Waste treatment methods

Product/packaging disposal: If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations; must not be disposed together with household refuse.

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

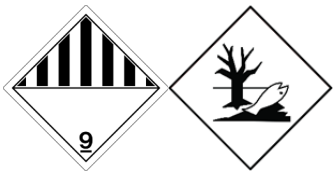
UN number: UN 3082

UN proper shipping name: Environmentally hazardous substance, liquid, N.O.S. Marine pollutant

Transport hazard class(es): 9

Packaging group: III

Transport labels:



Environmental hazards: See Section 2 - IMDG - Marine pollutant

Special precautions for user: Dangerous Goods Note
Tunnel Restriction code: 3 (E)

Maritime transport in bulk according to IMO instruments: UN 3082 - Environmentally hazardous substance, liquid, N.O.S.
Class 9, Packing Group III
Marine Pollutant

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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.

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.

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