




LEMONGRASS OIL (CITRATUS)

Section 1		Identification of the Substance/Mixture and of Company	
1.1 Product Identifier:	Cymbopogon citratus, ext.		
Other Names:	Lemongrass Oil – citratus type		
INCI Name:	Cymbopogon citratus oil		
EC number:	289-752-0		
CAS number:	89998-14-1		
REACH Registration number:	Not registered. Quantities not expected to exceed 1000kg per year		
1.2 Identified Uses:	Industrial use: Washing and cleaning products Professional use: Washing and cleaning products; polishes and wax blends; cosmetics Consumer use: Washing and cleaning products; polishes and wax blends; cosmetics; air care products; biocides		
1.3 Supplier name:	Khush Ingredients Ltd Unit 14, Oakfield Industrial Estate, Eynsham, Oxon, OX29 4TH UK E: office@khushing.com ; T: +44 (0) 1993 882883		
1.4 Emergency Telephone Number:	T: 01993 882883 (UK) 9-5pm, email office@khushing.com (cover 6am to 11pm) otherwise contact emergency services and show this datasheet.		
Section 2		Hazards Identification	
2.1 Classification according to Regulation (EC) No 1272/2008 [CLP]	Skin Irrit. 2 – H315, Skin Sens. 1 – H317, Eye Dam. 1 – H318, Aquatic Chronic 2 – H411		
2.2 Label Elements Labelling according to Regulation (EC) No 1272/2008 [CLP]	  		
Hazard pictograms	GHS05	GHS07	GHS09
Signal Word	DANGER		
Hazard statements	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		
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)	<p>P302+P352: IF ON SKIN: wash with plenty of water.</p> <p>P333+P317: IF SKIN irritation or rash occurs: Get medical help</p> <p>P362+P364: Take off contaminated clothing and wash it before reuse.</p> <p>P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.</p> <p>P305+P317: IF IN EYES: Get emergency medical help.</p> <p>P391: Collect spillage.</p>
Precautionary Statements (Storage)	P404: Store in a closed container
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	<p>All essential oils are highly concentrated so have strong aromas and colour that can stain. Lemongrass citratus oil contains over 10% Hydrocarbons (approximately 14%). Emergency treatment for those who accidentally swallow oils in this category is to seek medical attention immediately and transport sitting in a half-upright position. Lemongrass citratus oil is not identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100</p> <p>Lemongrass citratus oil does not meet the criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII</p>

Section 3

Composition/Information On Ingredients

3.1 Chemical identity of the substance:	Cymbopogon citratus, ext.
Common name(s), synonym(s):	Lemongrass Oil – citratus type,
3.2 Mixture / Natural Complex Substance (NCS)	This is a natural complex substance (NCS). The substance has a natural variability in its composition and has not been rectified by the producer. It is obtained by steam distillation of the dried grass Cymbopogon citratus
Chemical Identity of ingredients:	<p>Classification according to COMMISSION REGULATION (EU) 2017/542 of 22 March 2017 amending Regulation (EC) No 1272/2008</p> <p>Major components of this natural complex substance are:</p> <p>35 to 50% Geranial – CAS 141-27-5, EC 205-476-5: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319</p> <p>25 to 45% Neral – CAS106-26-3, EC 203-379-2: Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319</p> <p>3 to 10% Geraniol – CAS 106-24-1, EC 203-377-1: Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318</p> <p>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</p> <p>0.5 to 3% β-Caryophyllene – CAS 87-44-5, EC 201-746-1: Asp. Tox. 1, H304; Skin Sens. 1B, H317</p> <p>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. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410</p>

	<p>tr to 2% Camphene – CAS 79-92-5, EC 201-234-8: Flam. Sol. 2, H228; Eye Irrit. 2, H319; Aquatic Chronic 1, H410</p> <p>tr to 2% Methyl Heptanone – CAS 110-93-0, EC 203-816-7: Flam. Liq. 3, H226</p> <p>tr to 2% β-Myrcene – CAS 123-35-3, EC 204-622-5: Flam. Liquid 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</p> <p>tr to 2% Linalool - CAS 78-70-6, EC 201-134-4: Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319</p> <p>tr to 0.2% γ-Terpinene – CAS 99-85-4, EC 202-794-6: Flam. Liq. 3, H226; Repr. 2, H361; Aquatic Chronic 2, H411</p>
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Section 4

First Aid Measures

4.1 Description of first aid measures

4.1.1 General:

Remove contaminated clothing. Remove affected person from danger area. If the patient is likely to become unconscious, place and transport instable sideways position (recovery position). Show container, label and/or safety data sheet to physician.

4.1.2 Swallowed:

Rinse mouth immediately and then drink plenty of water, seek medical attention.

4.1.3 Eye Contact:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

4.1.4 Skin Contact:

Wash thoroughly with soap and water.

4.1.5 Inhalation:

Keep patient calm, remove to fresh air, seek medical attention.

4.1.6 Self Protection of First Aider

No additional measures specified.

4.2 Most important symptoms and effects, both acute and delayed

Not specified

4.3 Indication of any immediate medical attention and special treatment needed

Not specified

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 and carbon dioxide, smoke and soot.

5.3 Advice for Firefighters

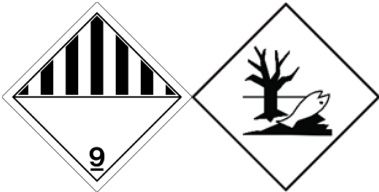
Avoid inhalation of smoke and fumes. Wear appropriate protective equipment and, in case of insufficient ventilation, self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Fire debris must be disposed of in accordance with official regulations.

5.4 Emergency Action Code	3[Y] (Foam + BA & Fire Kit)
Section 6 Accidental Release Measures	
6.1 Personal precautions, protective equipment and emergency procedures	<p>6.1.1 For non-emergency personnel: Use personal protective equipment. Avoid formation and/or breathing of vapour / aerosol / mist. Ensure adequate ventilation and keep unprotected persons away.</p> <p>6.1.2 For emergency responders: As per non-emergency personnel. Wear an appropriate NIOSH/MSHA approved respirator if mist, vapour or aerosol is generated.</p>
6.2 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.
6.3 Methods and material for containment and clean up	Clean up spillage promptly. Provide adequate ventilation. Avoid excessive inhalation of vapours. Small spillages may be absorbed and wiped up using suitable inert, absorbant material (diatomite, acid binders, universal binders, sawdust etc). Gross spillages should first be contained by a dike of sand or inert powder and then picked up / vacuumed using inert, absorbant material as previous 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	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	<p>7.1.1 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.</p> <p>7.1.2 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.</p>
7.2 Conditions for safe storage, including any incompatibilities	<p>Storage: Keep container tightly closed in a cool, dry and well-ventilated place.</p> <p>Packaging: Refer to section 16 for safe packaging information</p> <p>Incompatibilities: Refer to section 10</p>
7.3 Specific end use(s)	Recommendations: None specified
Section 8 Exposure Controls/Personal protection	
8.1 Control parameters	<p>8.1.1 Occupational exposure limits: Not available.</p> <p>8.1.2 Additional exposure limits under the conditions of use: Not available.</p> <p>8.1.3 DNEL/DMEL and PNEC-Values: Not available.</p>
8.2 Exposure controls	
8.2.1 Engineering controls:	Provide adequate ventilation according to the conditions of use to keep airborne concentrations low. Handle and store in accordance with good industrial hygiene and safety practices.

8.2.2 Personal protection equipment:	General:	It is recommended that facilities storing or utilising this material should be equipped with an eyewash facility and a safety shower. Wear appropriate PPE according to Directive 89/686/EEC. 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.
	Eye/face:	Wear safety glasses with side-shields according to EN 166.
	Skin:	Hand: Chemical-resistant, impervious gloves complying with an approved standard (EN374) should be worn if handling substance. For example, suitable chemical resistant safety gloves with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other. Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Gloves should be replaced regularly and if there is any indication of degradation or chemical breakthrough. Other: Wear protective clothing according to that recommended by the risk assessment for the product's use.
	Respiratory:	Wear respiratory protection if ventilation is inadequate and excessive airborne contamination occurs. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)
8.2.3 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, Federal, 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 brownish Odour: Characteristic lemon-like odour Relative Density (Specific Gravity) @ 25°C: 0.865 to 0.910 Refractive Index @ 20°C: 1.460 to 1.490 Optical Rotation @ 20°C: -8° to +2° Solubility @ 25°C: insoluble in water Boiling Point @101 325 Pa: 224°C Vapour Pressure @ 25°C: 26.7 Pa	

	<p>Freezing Point @101 325 Pa: <- 20°C</p> <p>Flash Point: 79°C (supplier value - Pensky Martens Closed Cup method)</p> <p>Flammability: the study does not need to be conducted because the substance is a liquid that 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; the classification procedure does not need to be applied</p> <p>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</p> <p>Auto-ignition temperature @101 325 Pa: 240°C</p> <p>Kinematic viscosity: no available data</p> <p>Partition Coefficient n-octanol/water (log value): no available data</p> <p>Relative Vapour Density: no available data</p>
9.2 Other Information:	<p>9.2.1 Information with regard to physical hazard classes: Categories not relevant for the safe use of this substance</p>
	<p>9.2.2 Other safety characteristics: Categories not relevant for the safe use of this substance</p>
Section 10 Stability and reactivity	
10.1 Reactivity	No further relevant information available
10.2 Chemical Stability	Product is stable under normal conditions and if used according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known. Hazardous polymerisation does not occur.
10.4 Conditions to avoid	Keep away from heat or flame. No further relevant information available
10.5 Incompatible materials	Oxidising Agents, strong acids, strong alkalis. No further relevant information available
10.6 Hazardous decomposition products	May produce carbon monoxide and carbon dioxide upon decomposition
Section 11 Toxicological Information (Historical data – we do not carry out animal testing)	
11.1 Information on toxicological effects	<p>Acute toxicity, oral: (Mouse) 24hr LD50 = 3500 mg/kg bw (Food & Chem. Tox. 49, 9: Sept 2011); Rat >5000 mg/kg (Opdyke 1976, HSDB 2015)</p> <p>Acute toxicity, inhalation: (Citral) Rabbit <27 mg/ml (Moyler 2010)</p> <p>Acute toxicity, dermal: rabbit LD50 > 5000 mg/kg</p> <p>Eye irritation: Classified Eye Dam. 1, H318 (ECHA C&L) – causes serious eye damage (geranial, neral and geraniol)</p> <p>Skin Irritation: Classified Skin Irrit. 2, H315 (ECHA C&L) – causes skin irritation</p> <p>Skin Sensitivity: Classified Skin Sens. 1, H317 (ECHA C&L) – may cause an allergic skin reaction</p> <p>Mutagenicity/Carcinogenicity: GHS criteria not met. Not genotoxic (Ames test)</p> <p>Fertility/Reproduction: No studies available</p>

	<p>STOT-single exposure: Data lacking (ECHA C&L)</p> <p>STOT-repeated exposure: Data lacking (ECHA C&L)</p> <p>Aspiration hazard: Data lacking (ECHA C&L)</p>
11.2 Information on other hazard classes which relates to endocrine disrupting properties	No information on other hazard classes specified
Section 12	Ecological Information
12.1 Toxicity	<p><i>Classified Aquatic Chronic 2, H411. Toxic to aquatic life with long lasting effects</i></p> <p>Fish: 24hr LC50 - <i>Argulus</i> sp. (ad) = 67.97 µg/L (Journal Fish Dis., 43:12, 1497-1504)</p> <p>Algae: <i>Pseudokirchnerella subcapitata</i>, 72h-ErL10 and 72h-ErL50 = 12 and 18 mg/L respectively (Eucalyptus citriodora)</p> <p>Aquatic invertebrates: <i>Daphnia</i> sp. (read-across study from Litsea cubeba) - 48h-EL50 = 4.2mg/L</p> <p>Microorganisms: Found to be bactericidal and fungicidal at higher concentration (1mg/ ml) while bacteriostatic at lower concentrations (<10µg/ ml) (Int. Res. Pharmacy and Phamacol. Vol 1 (9): 228-236)</p> <p>Terrestrial arthropods: <i>Sitophilus granarius</i> LD50 = 4.03 µg insect⁻¹ (Insects 2020, 11 (6), 379)</p>
12.2 Persistence and degradability	Considered readily biodegradable
12.3 Bioaccumulative potential	No relevant data available for substance itself but main components (geranial, citral, geraniol, geranyl acetate) are not considered bioaccumulative
12.4 Mobility in soil	No relevant data available
12.5 Results of PBT and vPvB assessment	No relevant data available but not considered PBT or vPvB based on key components
12.6 Endocrine disrupting properties	Lemongrass citratus 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	No relevant data available
Section 13	Disposal Considerations
13.1 Waste treatment methods	<p>13.1.1 Product / Packaging disposal:</p> <p>If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations. Unusable products, out of date, residues and contaminated packaging are considered as hazardous waste according to Directive 2008/98/EC (as modified by Regulation (EU) No 1357/2014). Therefore, they must be disposed of according to local and national rules into force. Contact a licensed company. Do not pour into drains or in the environment. Do not re-use empty containers.</p>

	<p>13.1.2 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.</p> <p>13.1.3 Sewage disposal – relevant information: Waste should not be disposed of by release to sewers.</p>
13.2 Special precautions for landfill and incineration	Waste is suitable for incineration
Section 14	Transport Information
14.1 UN Number	3082
14.2 UN Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
14.3 Transport Hazard Class	9
14.4 Packing Group	III
Transport Labels	
14.5 Environmental hazards	See section 2 - IMDG - Marine pollutant
14.6 Special precautions for user	Dangerous Goods Note Tunnel Restriction code: 3(E)
14.7 Maritime transport in bulk according to IMO instruments	UN3082 - Environmentally hazardous substance, liquid, n.o.s. Class 9; Packing group III Marine pollutant
Section 15	Regulatory Information
15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)
15.2 Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier
Section 16	Other Information
<p>This information has been reproduced by Khush Ingredients Ltd with permission from the producer.</p> <p>The data provided in this safety data sheet is meant to represent typical data for this widely used product. The data is obtained from current and reliable sources, but is supplied without warranty, expressed or implied regarding its correctness or accuracy. It is up to the user to determine safe conditions for use and to assume liability for loss, injury or damage or expense arising from improper use of this product.</p>	
Date of preparation or last revision of the SDS:	Date of original preparation of SDS: December 2010 Last updated for UK use: May 2023

Safety Data Sheet



	This data sheet replaces all previous editions. The content of the SDS is regulated by the Regulation (EC) n°1907/2006 (REACH).	
Indication of changes:	New template to include information required to meet the new format according to Regulation (EU) 2020/878 (the inclusion of new subsections as well as the expansion of existing information such as sections 11 and 12) P-statement updates (section 2) according to latest version of GHS list (GHS, Rev 9, 2021)	
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	