



# KERFOOT

**Avril** GROUP

## MATERIAL SAFETY DATA SHEET According to EU Regulation 1907/2006

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING)

#### 1.1 PRODUCT IDENTIFIER

<b>Product Name</b>	Lemon Essential Oil
<b>Biological Definition</b>	Citrus Limon Peel Oil is the volatile oil obtained from the fresh peel of the Lemon, Citrus limon (L.), Rutaceae
<b>INCI Name</b>	Citrus Limon Peel Oil
<b>Synonyms &amp; Trade Names</b>	-
<b>Internal Product Code</b>	R00230
<b>CAS Number</b>	8008-56-8 / 84929-31-7
<b>EC Number</b>	284-515-8
<b>EINECS Number</b>	284-515-8
<b>REACH Status</b>	Registered by the supply chain

#### 1.2 DETAILS OF THE SUPPLIER OF THE MATERIAL SAFETY DATA SHEET

<b>Company</b>	Kerfoot Avril Group The Olive House Standard Way Industrial Estate, Darlington Road, Northallerton, North Yorkshire, England DL6 2XA
<b>Emergency Telephone Number</b>	01609 766790



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## SECTION 2: HAZARD IDENTIFICATION





### 2.1 CLASSIFICATION OF THE SUBSTANCES OR MIXTURE

The Full Text for all Hazard Statements are Displayed in Section 16.

<b>Classification (EU 1272/2008)</b>	Flammable Liquid, Hazard Category 3. FL3, H226, GHS02 Skin Corrosion / Irritation Category 2. SC12, H315, GHS07 Sensitization - Skin Category 1. SS1, H317, GHS07 Aspiration Hazard Category 1. AH1, H304, GHS08 Hazardous to the Aquatic Environment - Acute Hazard Category 1. EHC1, H410, GHS09
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### 2.2 LABEL ELEMENTS

Label in accordance with Regulation (EC) No 1272/2008

<b>GHS Label:</b>	    GHS08      GHS09      GHS07      GHS02
<b>Signal word:</b>	Danger
<b>Contains</b>	Limonene, Pinenes, Citral, Myrcene
<b>Hazard Statements:</b>	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. H410, Very toxic to aquatic life with long lasting effects.
<b>Precautionary Statements:</b>	P210, Keep away from heat, sparks, open flames and hot surfaces. - No smoking. P241, Use explosion-proof electrical, ventilating and lighting equipment. P262, Do not get in eyes, on skin or on clothing. P273, Avoid release to the environment. P280, Wear protective gloves/eye protection/face protection. P301/310, IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303/361/353, IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P331, Do not induce vomiting.
<b>Supplementary Precautionary Statements:</b>	P405, Store locked up. P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

### 2.3 OTHER HAZARDS

<b>PBT or vPvB according to Annex XIII</b>	No additional data available.
<b>Adverse physio-chemical properties</b>	No additional data available.
<b>Adverse effects on human health</b>	With the presence of furocoumarins, the product may have phototoxic effects (Skin).

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 MIXTURE

~ **66.0% Limonene** CAS-No: 5989-27-5; EC No.: 227-813-5  
Classification (EC 1272/2008) Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Skin Sens. 1 - H317, Asp. Tox. 1 - H304, Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410

~ **13.0%  $\beta$ -Pinene** CAS No: 127-91-3; EC No: 20-872-5  
Classification (EC 1272/2008) Flam. Liq. 3 - H226, Asp. Tox. 1 - H304, Skin Irrit. 2 - H315, Skin Sens. 1 - H317

~ **9.0%  $\nu$ -Terpinene (p-mentha-1,4-diene)** CAS No99-85-4; EC No: 202-794-6  
Classification (EC 1272/2008) Flam. Liq. 3 - H226, Asp Tox. 1 - H304;

~ **3.0% Citral** CAS No: 5392-40-5; EC No: 226-394-6  
Classification (EC 1272/2008) Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. 1 - H317

~ **2.5%  $\alpha$ -Pinene** CAS No: 80-56-8; EC No: 201-291-9



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Classification (EC 1272/2008) Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Sens. 1, H317; Aquatic Acute 1, Aquatic Chronic 1, H410

~ **1.5% Sabinene** CAS No: 3387-41-5 ; EC No: 222-212-4  
Classification (EC 1272/2008) Flammable Liq. Cat 3, H226

~ **1.5% Myrcene** CAS No: 123-35-3 ; EC No: 204-622-5  
Classification (EC 1272/2008) Flam. Liq. 3 - H226, Asp. Tox. 1 - H304, Aquatic Chronic 3 - H412

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

<b>Inhalation</b>	Remove from exposure area to fresh air. Obtain medical advice immediately.
<b>Ingestion</b>	Wash mouth out with water and obtain medical advice immediately. <b>DO NOT INDUCE VOMITING!</b>
<b>Skin Contact</b>	Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical advice if irritation persists or there is any sign of tissue damage.
<b>Eye Contact</b>	Flush with plenty of water for at least 15 minutes. Remove contact lenses. Seek medical advice.

### 4.2 MOST IMPORTANT SYMPTOMS. BOTH ACUTE AND DELAYED.

Symptoms  
Inhalation: can cause slight headache.  
Contact: can cause bloodshot eyes. Can cause slight skin rash.

### 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED

Immediate medical assistance: see Section 4.1 for further information.  
Immediate special treatment: see Section 4.1 for further information.  
First aid specific means: eye wash fountains / safety shower should be available in the work area

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 EXTINGUISHING MEDIA

Suitable extinguishing media:  
Small fire: CO<sub>2</sub>, Dry powder, Foam. Spray to base of flames.  
Large Fire: use water spray or fog. Cool containers with a water jet to prevent pressure build up, auto-ignition or explosion.  
Unsuitable extinguishing media: pressurised water jet.

### 5.2 SPECIAL HAZARDS ARISING FROM THE PRODUCT

Vapours may form an explosive mixture with air. In case of fire, Carbon monoxide, carbon dioxide, smoke and soot may be liberated.

### 5.3 ADVICE FOR FIRE FIGHTERS

Standard procedure for chemical fires. Spray extinguishing media to base of flames. Wear protective clothing. Avoid inhalation of vapours. Wear suitable respiratory equipment, if insufficient ventilation. Closed containers may build up pressure when exposed to heat and should be cooled with water spray.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

In an emergency (i.e. un-intentional release of the substance exceeding the DNEL) respiratory protection (gas filter A colour code brown) must be worn. Consider the maximum duration for wear. Use insulating device for respiratory protection with an independent air supply if:-

- the concentration is above the usage for filter devices,
- for oxygen concentrations below 17% volume,
- in circumstances unclear.

Use adequate protection. E.g. solvent resistant security shoes, body suit, gloves and protective goggles. (see point 8).

Remove any ignition source and ensure adequate ventilation in working areas following accidental release



## 6.2 ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains, water courses or onto the ground. Keep away from surface and ground water.

## 6.3 METHODS AND MATERIAL FOR CONTAMINATED AND CLEANING UP

Remove ignition sources. Ensure adequate ventilation. Absorb with inert, non-combustible, inorganic absorbent material, sweep up and remove to an approved disposal container. Dispose of according to current local authority guidelines.

## 6.4 REFERENCES TO OTHER SECTIONS

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

Apply good manufacturing practice & industrial hygiene practices, ensuring proper workplace ventilation. Keep original container closed. Avoid contact with skin and eyes. Observe good personal hygiene, and do not eat, drink or smoke whilst handling. Keep away from heat, sparks and open flame. Avoid exposing to high temperatures during processing.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

To be stored in stainless steel drums, preferably under an inert atmosphere (e.g. nitrogen) with minimum head space protected from daylight. \*NB\* the container used during transportation must be considered as only a temporary container and it must not be considered in any case adequate for medium or long term warehousing. Store in a dry, aerated place (between 5 – 20°C) away from heat and ignition sources.

### 7.3 SPECIFIC END USE(S)


Flavours, Fragrances: Use in accordance with good manufacturing and industrial hygiene practices.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

No additional data available.

### 8.2 EXPOSURE CONTROLS

Protective equipment	
Process Conditions	Provide eyewash station.
Engineering Measures	Provide adequate ventilation Avoid static discharges in working area.
Respiratory Equipment	Avoid breathing vapours. Respiratory equipment should not be necessary with adequate ventilation.
Hand Protection	Avoid all skin contact. Wear chemical resistant gloves (PVC) tested to EN374.
Eye Protection	Avoid contact with eyes. Wear approved safety goggles with built in frame tested to EN166.
Other Protection	No additional data available.



<b>Hygiene Measures</b>	Good personal hygiene practices are always advisable, especially when working with chemicals / oils. Keep away from foodstuffs, beverages and feed.
<b>Personal Protection</b>	Avoid inhalation and contact with skin and eyes.
<b>Skin Protection</b>	Wear protective clothing to avoid skin contact.
<b>Environmental Exposure Controls</b>	Avoid discharging into drainage water. Only eliminate by authorised companies.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIS PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Mobile liquid
<b>Colour</b>	Colourless to yellow
<b>Odour</b>	Characteristic, that of fresh lemon peel
<b>Specific Gravity @ 20°C</b>	0.840 – 0.861
<b>Refractive Index @ 20°C</b>	1.465 – 1.485
<b>Flash Point (°C)</b>	~ 49.0 °c
<b>Melting Point (°C)</b>	No additional data available.
<b>Boiling Point (°C)</b>	~ 170°C ± 10°C @ 1026hPa
<b>Vapour Pressure</b>	186.4 Pa @25°C.
<b>Solubility in Water @20°C</b>	Insoluble in water. Soluble in alcohol and other oils.
<b>Auto-ignition temperature (°C)</b>	~ 235.0 °c

### 9.2 OTHER INFORMATION

No additional data available.



## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY

Presents no significant reactivity hazards, by itself or in contact with water. Stable under normal temperature and storage conditions and recommended use.

### 10.2 CHEMICAL STABILITY

Stable under normal temperature and storage conditions and recommended use.

### 10.3 POSSIBLE HAZARD REACTIONS

Not expected under normal temperature conditions and recommended use.

### 10.4 CONDITIONS TO AVOID

Avoid heat, sparks and open flames.

### 10.5 INCOMPATIBLE MATERIALS

Avoid contact with strong acids, alkalis and oxidising agents.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Not expected under normal temperature conditions and recommended use. In case of combustion; CO<sub>2</sub> and CO may be released.

## SECTION 11: TOXOLOGICAL INFORMATION

### 11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

<b>Acute toxicity</b>	LD50: 5000mg/kg bw (oral: rat) LD50: 10000 mg/kg bw (Dermal: rabbit) (source CSR)
<b>Skin corrosion / irritation</b>	Causes skin irritation (H315).
<b>Serious eye damage/irritation</b>	Not classified as irritating to the eye (source CSR)
<b>Respiratory or skin sensitisation</b>	May cause an allergic skin reaction (H317).
<b>Germ cell mutagenicity</b>	Negative. (Source CSR).
<b>Carcinogenicity</b>	Not tested (source CSR).
<b>Reproductive toxicity</b>	Not classified.
<b>STOT-single exposure</b>	Not classified.
<b>STOT-repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways (H304).
<b>Photo-toxicity</b>	Not classified.
<b>Other information:</b>	No additional data available.



## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 TOXICITY

Aquatic life:	H410; Very toxic to aquatic life with long lasting effects.		
Algae/aquatic plants:	EC50/LC50 for freshwater algae: 0.523 mg/l (source CSR).		
Fish:	LC50 for freshwater fish: 0.341 mg/l (Source CSR).		
Aquatic invertebrates:	EC50/LC50 for fresh water invertebrates; 0.313 mg/l (source CSR).		
PNECs:	water:	Aqua (freshwater):	5.4 µg/l
		Aqua (marine water):	0.54 µg/l
		Aqua (intermittent release):	577 µg/l
		Sediment (freshwater):	1.3 mg/kg sediment dw
		Sediment (marine water):	0.13 mg/kg sediment dw
		Sewage treatment plant:	2.1 mg/l
		Soil:	0.261 mg/kg soil dw
Oral:	13.3 mg/kg		

(Source CSR)

### 12.2 PERSISTENCE AND DEGRADABILITY

Considered as readily biodegradable based on its ready biodegradability. Oil does not fulfil the criteria for persistence.

### 12.3 BIOACCUMULATION POTENTIAL

H410 very toxic to aquatic life with long lasting effects.

### 12.4 MOBILITY IN SOIL

Considered as a readily biodegradable NCS. Based on the ready biodegradability of the NCS, simulation tests in surface water, sediment and soil are not required in accordance with column 2 of REACH Annex IX.

### 12.5 RESULTS OF PBT AND VPVB ASSESSMENT

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6 OTHER ADVERSE EFFECTS

Do not discharge into the environment especially not into waterways, sewers and the sea.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 WASTE TREATMENT METHODS

Do not release into the environment. Collect waste into suitable containers and contact hazardous chemical disposal company. Containers must be completely empty before disposal.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN NUMBER

UN No. Road	UN 1169
UN No. Sea	UN 1169
UN No. Air	UN 1169

### 14.2 UN PROPER SHIPPING NAME

EXTRACTS, AROMATIC, LIQUID

### 14.3 TRANSPORT HAZARD CLASS(ES)





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**ADR/RID/ADN Class:** 3 Flammable Liquid.  
**IMDG Class:** 3 Flammable Liquid.  
**ICAO Class/Division:** 3 Flammable Liquid.

#### 14.4 PACKAGING GROUP

ADR/RID/ADN Packing group III  
IMDG Packing group III  
ICAO Packing group III

#### 14.5 ENVIRONMENTAL HAZARDS

Environmentally Hazardous Substance/Marine Pollutant



#### 14.6 SPECIAL PRECAUTIONS FOR USER

This product contains flammables and dangerous for the environment. In case on pouring out, make sure label new packaging accordingly. Reproducing original label with relevant symbols.

#### 14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE

No additional data available

### SECTION 15: REGULATORY INFORMATION

#### 15.1 SAFETY, HEALTH AND ENVIRONMENT REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I. 2009 No. 716).

Guidance Notes

Workplace Exposure Limits EH40. CHIP for everyone HSG (108).

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

#### 15.2 CHEMICAL SAFETY ASSESSMENT

No additional information available.

### SECTION 16: OTHER INFORMATION

**Hazard and/or Precautionary Statements in Full**

None

**Other Information**

Complies with REACH guidance for SDS as circulated by ECHA 2011.

**Version**

2

**Revision Date**

17<sup>th</sup> August 2018

**Reason for Revision**

REACH and Analytical Details

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their own particular use.





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