

# Material Safety Data Sheet

EU Regulation: 1907/2006

SECTION 1: Identification of the sub	stance/mixture and of the company/undertaking
1.1 Product Identification	
Product Name	LEMON ESSENTIAL OIL ORGANIC
Biological Definition	CITRUS LIMON PEEL OIL IS THE VOLATILE OIL OBTAINED BY COLD COMPRESSION OF THE FRESH PEEL OF THE LEMON, CITRUS LIMON (L.), RUTACEAE.
INCI Name	CITRUS LIMON PEEL
Synonyms & Trade Names	-
Internal Product Code	K0255
CAS-No	8008-56-8 / 84929-31-7
1.2 Details of the supplier of the safety data sheet	
Company Address	Akoma International (UK) Limited Unit 9A Sawley Park Nottingham Road Derby DE21 6AS Tel: +44 (0) 1332 613 967
Email	technical@akoma.biz
1.3 Details of the supplier of the safety data sheet	
Emergency Contacts	Mr. Wynn Mensah – Tel: 01332 613 967

SECTION 2: Hazards Identification	
2.1 Classification of the substance or mixture	THE FULL TEXT FOR ALL HAZARD STATEMENTS IS DISPLAYED IN SECTION 16.
Classification (67/548/EEC)	NO ADDITIONAL DATA AVAILABLE.
Classification (EU1272/2008)	FLAMMABLE LIQUID, HAZARD CATEGORY 3. H226 SKIN CORROSION / IRRITATION CATEGORY 2. H315 SENSITIZATION - SKIN CATEGORY 1. H317

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ASPIRATION HAZARD CATEGORY 1. H304
HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD CATEGORY 1. H410

2.2 Label Element	LABEL IN ACCORDANCE WITH REGULATION (EC) NO 1272/2008.
Label in accordance with Regulation (EC) No 1272/2008.	
GHS Label	GHS02 GHS07 GHS08 GHS09
Signal Word	DANGER.
Contains	LIMONENE, PINENES, CITRAL, MYRCENE
Hazards Statement	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.
Precautionary Statements	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.
Supplementary Precautionary Statements	P331, DO NOT INDUCE VOMITING. P405, STORE LOCKED UP.
Supplementally recautionally statements	P501, DISPOSE OF CONTENTS/CONTAINER TO APPROVED DISPOSAL SITE, IN ACCORDANCE WITH LOCAL
	REGULATIONS.
	Section 16 (Other Information): Risk & Safety phrases in full.
2.3 Other Hazards	
Adverse physio-chemical properties	NO DATA
Adverse effects on human health	WITH THE PRESENCE OF FUROCOUMARINS, THE PRODUCT MAY HAVE PHOTOTOXIC EFFECTS (SKIN).
PBT OR VPVB ACCORDING TO ANNEX XIII	NO DATA

SECTION 3: Composition of Ingredients	
3.1 Mixtures	~ 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

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~ 13.0% B-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% Γ-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% A-PINENE CAS NO: 80-56-8; EC NO: 201-291-9
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	
General Information	ALWAYS REMOVE CONTAMINATED CLOTHING IMMEDIATELY.
Inhalation	GET MEDICAL ATTENTION IMMEDIATELY. REMOVE FROM EXPOSURE SITE TO FRESH AIR, KEEP AT REST, AND OBTAIN MEDICAL ATTENTION.
Ingestion	GET MEDICAL ATTENTION IMMEDIATELY. IMMEDIATELY CALLY THE POISON CENTRE OR DOCTOR. RINSE MOUTH WITH WATER AND OBTAIN MEDICAL ATTENTION.
Skin Contact	REMOVE CONTAMINATED CLOTHES. WASH THOROUGHLY WITH SOAP AND WATER. CONTACT PHYSICIAN IF IRRITATION PERSISTS.
Eye Contact	FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. CONTACT PHYSICIAN IF SYMPTOMS PERSIST.
4.2 Most important symptoms & effects (Acute & Delayed)	INHALATION MAY CAUSE COUGHING AND DIFFICULTIES IN BREATHING. INGESTION IRRITATING TO THE RESPIRATORY TRACT AND MAY CAUSE DAMAGE TO THE CENTRAL NERVOUS SYSTEM. SKIN CONTACT TOXIC IN CONTACT WITH SKIN. EYE CONTACT MAY CAUSE EYE IRRITATION.
4.3 Indication of any immediate medical attention or special treatment required	NONE EXPECTED, SEE SECTION 4.1 FOR FURTHER INFORMATION.

SECTION 5: Fire Fighting Measures	
5.1	
Extinguishing material	FOAM, CO2, DRY CHEMICAL POWDER.
5.2	
Special hazards arising from the substance Or	BURNING PRODUCES IRRITATING, TOXIC AND OBNOXIOUS FUMES.

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mixture	
5.3	SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS:
Advice for fire-fighters	WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND APPROPRIATE PROTECTIVE
	CLOTHING.

SECTION 6: Accidental Release Measures	
6.1 Personal precautions	ENSURE ADEQUATE VENTILATION OF THE WORKING AREA, EVACUATE PERSONNEL TO SAFE AREA, WEAR SUITABLE PROTECTIVE EQUIPMENT. NO SMOKING, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION NEAR SPILLAGE. AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
6.2 Environmental precautions	DO NOT DISCHARGE INTO DRAINS, WATER COURSES OR ONTO THE GROUND. DISPOSE OF IN LINE WITH LOCAL AUTHORITY GUIDELINES.
6.3 Methods & material for containment and cleaning up	REMOVE IGNITION SOURCES. PROVIDE ADEQUATE VENTILATION. AVOID EXCESSIVE INHALATION OF VAPOURS. CONTAIN SPILLAGE IMMEDIATELY BY USE OF SAND OR INERT POWDER. DISPOSE OF ACCORDING TO LOCAL REGULATIONS.
6.4 References to other sections	REFER & CONSIDER SECTION 8. REFER & CONSIDER SECTION 13.

SECTION 7: Handling & Storage	
7.1 Precautions for safe-handling	HANDLE IN ACCORDANCE WITH GOOD HYGIENE AND SAFETY PRACTICE. KEEP AWAY FROM HEAT, SPARKS, OPEN FLAMES AND HOT SURFACES NO SMOKING. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. USE IN ACCORDANCE WITH GOOD MANUFACTURING AND INDUSTRIAL HYGIENE PRACTICES. USE IN AREAS WITH ADEQUATE VENTILATION DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
7.2 Conditions for safe storage, including any Incompatibilities	KEEP THE PRODUCT CONTAINER TIGHTLY CLOSED, IN A DRY, VENTILATED AREA. KEEP AWAY FROM POTENTIAL SOURCES OF IGNITION AND PROTECTED FROM LIGHT. MAINTAIN LIMITED CONTACT WITH OXYGEN.
7.3 Specific end use(s)	NO DATA.

SECTION 8: Exposure Controls & Personal Protection	
8.1 Control Parameters	NO DATA.
8.2 Exposure Controls	
Eye Protection	WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
Hand Protection	WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
Respiratory Equipment	UNDER NORMAL CONDITIONS OF USE AND WHERE ADEQUATE VENTILATION IS AVAILABLE TO PREVENT BUILD UP OF EXCESSIVE VAPOUR, THIS MATERIAL SHOULD NOT REQUIRE SPECIAL ENGINEERING CONTROLS. HOWEVER, IN CONDITIONS OF HIGH OR PROLONGED USE, OR HIGH TEMPERATURE OR OTHER CONDITIONS WHICH INCREASE EXPOSURE, THE FOLLOWING ENGINEERING CONTROLS CAN BE USED TO MINIMISE EXPOSURE TO

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	PERSONNEL: A) INCREASE VENTILATION OF THE AREA WITH LOCAL EXHAUST VENTILATION. B) PERSONNEL CAN
	USE AN APPROVED, APPROPRIATELY FITTED RESPIRATOR WITH ORGANIC VAPOUR CARTRIDGE OR CANISTERS
	AND PARTICULATE FILTERS. C) USE CLOSED SYSTEMS FOR TRANSFERRING AND PROCESSING THIS MATERIAL.
	ALSO REFER TO SECTIONS 2 AND 7.
Hygiene Measures	GOOD PERSONAL HYGIENE PRACTICES ARE ALWAYS ADVISABLE, ESPECIALLY WHEN WORKING WITH CHEMICALS
	/ OILS.
Engineering Measures	NONE.
Skin Protection	WEAR PROTECTIVE CLOTHING TO REDUCE THE RISK OF SKIN AND EYE CONTACT.
Personal Protection	AVOID INHALATION OF THE PRODUCT. AVOID CONTACT WITH SKIN AND EYES.
Other Protection	WEAR SUITABLE PROTECTION TO AVOID CONTACT WITH SKIN AND EYES. DO NOT INHALE VAPOURS.
Process Conditions	ENSURE AREA IS WELL VENTILATED. AVOID VAPOUR INHALATION. SAFETY SHOWER & EYE BATH.
Enviromental Exposure Controls	AVOID DISCHARGING INTO DRAINAGE WATER.

SECTION 9: Physical & Chemical Properties	
9.1 Physical & Chemical Properties	
Appearance	LIQUID
Colour	COLOURLESS - YELLOW
Odour	CHARACTERISTIC, FRESH LEMON
Relative Density	0.846 – 0.857
Refractive Index	1.472 – 1.478
Flash Point (°C)	49°C.
Solubility in Water @ 20°C	INSOLUBLE IN WATER. SOLUBLE IN ALCOHOL AND OTHER OILS.
9.2 Other Information	NO DATA.

SECTION 10: Exposure Controls & Personal Protection	
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	STABLE UNDER SUGGESTED STORAGE CONDITIONS (<15°C).
Chemical stability 10.3	NO.
Possibility of hazardous reactions	NO.

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10.4	STORAGE AT HIGH TEMPERATURES. DO NOT STORE ABOVE 15°C.
Conditions to avoid	
10.5	P.V.C
Incompatible materials	
10.6	THIS PRODUCT DOES NOT DECOMPOSE UNDER NORMAL CONDITIONS. UNDER FIRE CONDITIONS THE PRODUCT
Hazardous decomposition products	WILL PRODUCE A MIXTURE OF IRRITATING FUMES & SMOKE & CARBON MONOXIDE.

SECTION 11: Toxicological Information	
11.1 Toxicological effects	
Acute Toxicity	LD50: 5000MG/KG BW (ORAL: RAT)
	LD50: 10000 MG/KG BW (DERMAL: RABBIT) (SOURCE CSR)
Skin irritation	CONSIDERED A SKIN IRRITANT (ROUTE: DRM). THERE MAY BE IRRITATION AND REDNESS AT SITE OF CONTACT.
Eye damage or irritation	NOT CLASSIFIED AS IRRITATING TO THE EYE (SOURCE CSR)
Respiratory or skin sensitivity	MAY CAUSE AN ALLERGIC SKIN REACTION.
Germ cell mutagenicity	NEGATIVE. (SOURCE CSR).
Carcinogenicity	NOT APPLICABLE.
Reproductive toxicity	NOT APPLICABLE.
STOT – single exposure	NOT APPLICABLE.
STOT – repeated exposure	NOT APPLICABLE.
Aspiration hazard	MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS (H304).
Other information	NO DATA.

SECTION 12: Ecological Infor	mation
12.1	MARINE POLLUTANT.
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	TO BE CONSIDERED AS READILY BIODEGRADABLE BASED ON ITS READY BIODEGRADABILITY. OIL DOES NOT
Persistence & degradability	FULFIL THE CRITERIA FOR PERSISTENCE.

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12.3 Bio- accumulative potential	BIOACCUMULATION POTENTIAL.
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 EFFECTS.
12.5 Results of PBT & VPVB assessment	THIS SUBSTANCE DOES NOT MEET THE PBT/VPVB CRITERIA OF REACH, ANNEX XIII.
12.6 Other adverse effects	DO NOT ALLOW PRODUCT TO ENTER STREAMS, SEWERS OR OTHER WATERWAYS.

SECTION 13: Disposal Information	
13.1 Waste treatment methods	ALWAYS RECOVER SPILLED PRODUCT. DISCARD WASTE MATERIAL WITH AUTHORIZED WASTE MANAGEMENT SERVICES. ACT IN ACCORDANCE WITH LOCAL & NATIONAL WASTE REGULATIONS.

SECTION 14: Transport	
Information	
14.1	
Transport Information	
UN NUMBER	ROAD: 1169
	RAIL: 1169
	AIR: 1169
14.2	
UN Shipping Name	EXTRACTS, AROMATIC, LIQUID.
14.3	ADR/RID/ADN CLASS: 3 FLAMMABLE LIQUID.
TRANSPORT HAZARD CLASS(ES)	IMDG CLASS: 3 FLAMMABLE LIQUID.
	ICAO CLASS/DIVISION: 3 FLAMMABLE LIQUID.
	TRANSPORT LABELS
	FLAMMABLE
	The state of the s
14.4 PACKING GROUP	ADR/RID/ADN PACKING GROUP III
	IMDG PACKING GROUP III
	ICAO PACKING GROUP III
14.5	
ENVIROMENTAL HAZARDS	ENVIRONMENTALLY HAZARDOUS SUBSTANCE/MARINE POLLUTANT
	<b>₹</b> 2
	<del></del>
14.6	
SPECIAL PRECAUTIONS FOR USER	
C. L.C. II. C. II. C. I.	

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	TARIFF CODE: 3301131000. 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 & THE IBC CODE.	NO ADDITIONAL DATA.

SECTION 15: Regulatory Information	
15.1 Product specific safety, health & environmental regulations & legislation	
EU Directives	REGULATION (EC) NO 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 18TH DECEMBER 2006. CONCERNING THE REGISTRATION, EVALUATION, AUTHORIZATION & RESTRICTION OF CHEMICALS (REACH), ESTABLISHING A EUROPEAN CHEMICALS AGENCY, AMENDING DIRECTIVE 1999/45/EC AND REPEALING COUNCIL REGULATION (EEC) NO793/93 & COMMISSION REGULATION (EC) NO1488/94 AS WELL AS COUNCIL DIRECTIVE 76/769/EEC & COMMISSION DIRECTIVE 91/155/ECC, 93/67/ECC, 93/105/EEC & 2000/21/EC (INCLUDING AMENDMENTS).
Statutory Instruments	THE CHEMICALS (HAZARD INFORMATION & PACKAGING FOR SUPPLY REGULATIONS 2009 (S.I.2009 NO 716).
Approved Code of Practice	CLASSIFICATION & LABELLING OF SUBSTANCES & PREPARATIONS DANGEROUS FOR SUPPLY. SAFETY DATA SHEETS FOR SUBSTANCES & PREPARATIONS.
Guidance Notes	WORKPLACE EXPOSURE LIMITS EH40. CHIP FOR EVERYONE HSG 108.
15.2 Chemical Safety Assessment	-

SECTION 16: Other Information	
HAZARD AND/ OR PRECAUTIONARY STATEMENTS IN FULL	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.
Training Instructions: Refer to possible hazard before	· · · · · · · · · · · · · · · · · · ·
Abbreviations & Acronyms:	
MSDS	Material Safety Data Sheet.
INCI	International Nomenclature of Cosmetic Ingredients.
CAS	Chemical Abstract Service.
IMDG	International Maritime code for Dangerous Goods.
ADR	Accord European sur le transport des merchandises Dangereuses par Route (European Agreement concerning the international Carriage of Dangerous goods by Road).
RID	International Carriage of Dangerous Goods by Rail.
ICAO	International Civil Aviation Organization.
ADN	International Carriage of Dangerous Goods by Inland Waterways.
GHS	Globally Harmonized System of classification & labelling of chemicals.

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Trem Card	Transport Emergency Card.
STOT	Specific Target Organ Toxicity.

Q.C. REQUIREMENTS. In-line with general product specification. Always satisfy suitability for specific application.

#### Disclaimer.

The data provided in this material safety data sheet is meant to represent typical data/analysis for this product and is correct to the best of our knowledge. The data was obtained from current and reliable sources, but is supplied without warranty, expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product, and to assume liability for loss, injury, damage or expense arising from improper use of this product. The information provided does not constitute a contract to supply to any specification, or for any given application, and buyers should seek to verify their requirements and product use.



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