





## MATERIAL SAFETY DATA SHEET

### 01. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING

<b>1.1 Product Identifier</b>					
Product Name		Sweet Orange Essential Oil			
Biological Definition		Citrus Aurantium Dulcis Peel Oil Expressed is an essential oil expressed from the fresh epicarps of the Sweet Orange, Citrus aurantium L. var. dulcis L. (syn: Citrus sinensis), Rutaceae.			
INCI Name		Citrus Aurantium Dulcis Peel Oil Expressed			
Synonyms & Trade Names		Orange Essential Oil			
CAS-No	8028-48-6	EC No.	232-433-8	EINECS No.	232-433-8
<b>1.2 Relative identified uses of the substance or mixture and uses advised against</b>					
No additional data available.					
<b>1.3 Details of the supplier of the safety data sheet</b>					
NTM UK LTD, 69 Bethel Street, Norwich, Norfolk, United Kingdom NR2 1NR					
<b>1.4 Emergency Tel. No.</b>			+44(0)1603 610883		

### 02. HAZARDS IDENTIFICATION

<b>2.1 Classification of the substance or mixture</b>			
The Full Text for all Hazard Statements is displayed in Section 16.			
Classification (EC 1272/2008)			
Physical and Chemical Hazards Flam. Liq. 3 - H226 Human health Skin Irrit. 2 - H315; Skin Sens. 1 - H317; Asp. Tox. 1 - H304 Environment Aquatic Chronic 1 - H410			
<b>2.2 Label Elements</b>			
Label in accordance with (EC) No 1272/2008			
GHS08 	GHS07 	GHS02 	GHS09 
Signal Word	Danger.		
Contains	Alpha pinene natural, a-terpineol (p-menth-1-en-8-ol), CITRAL, Citronellal, Decanal, d-LIMONENE, Linalool, Myrcene (7-methyl-3-methyleneocta-1,6-diene), Octanal		
<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.			

## Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P262 Do not get in the eyes, on skin, or on clothing.  
 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

P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264 Wash ... thoroughly after handling.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P302+352 IF ON SKIN: Wash with plenty of soap and water.  
 P321 Specific treatment (see ... on this label).  
 P331 Do NOT induce vomiting.  
 P332+313 If skin irritation occurs: Get medical advice/attention.  
 P333+313 If skin irritation or rash occurs: Get medical advice/attention.  
 P362 Take off contaminated clothing and wash before reuse.  
 P363 Wash contaminated clothing before reuse.  
 P370+378 In case of fire: Use ... for extinction.  
 P391 Collect spillage.  
 P403+235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.  
 P501 Dispose of contents/container according to local regulations.

## 2.3 Other Hazards

PBT or vPvB according to Annex XIII	No additional data available.
Adverse physio-chemical properties	No additional data available.
Adverse effects on human health	No additional data available.

## 03. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

<p><b>≤ 97.0% D-Limonene</b> 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</p>
<p><b>1.0 – 5.0% α-Pinene Natural</b> CAS-No: 80-56-8 EC No.: 201-291-9          Classification (EC 1272/2008): Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Skin Sens. 1 - H317,          Asp. Tox. 1 - H304</p>
<p><b>1.0 – 5.0% α-Terpineol (p-menth-1-en-8-ol)</b> CAS-No: 98-55-5 EC No.: 202-680-6          Classification (EC 1272/2008): Skin Irrit. 2 - H315, Eye Irrit. 2 - H319</p>
<p><b>1.0 – 5.0% Citral</b> 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</p>
<p><b>1.0 – 5.0% Citronellal</b> CAS-No: 106-23-0 EC No.: 203-376-6 Classification (EC 1272/2008):          Skin Irrit. 2 - H315, Skin Sens. 1 - H317, Aquatic Chronic 2 - H411</p>
<p><b>1.0 – 5.0% Decanal</b> CAS-No: 112-31-2 EC No.: 203-957-4          Classification (EC 1272/2008): Skin Irrit. 2 - H315, Aquatic Chronic 3 - H412</p>

<p><b>1.0 – 5.0 Linalool</b> CAS-No: 78-70-6 EC No.: 201-134-4 Classification (EC 1272/2008): Skin Irrit. 2 - H315</p>
<p><b>1.0 – 5.0 % Myrcene (7-methyl-3-methyleneocta-1,6-diene)</b> CAS-No: 123-35-3 EC No.: 204-622-5 Classification (EC 1272/2008): Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319 Asp. Tox. 1 - H304</p>
<p><b>1.0 – 5.0 % Octanal</b> CAS-No: 124-13-0 EC No.: 204-683-8 Classification (EC 1272/2008): Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319 Aquatic Chronic 3 - H412</p>

## 04. FIRST AID MEASURES

<b>4.1</b>	<b>Description of first aid measures</b>
Inhalation	Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Ingestion may cause nausea and vomiting. Seek medical attention if irritation or symptoms persist. Do not induce vomiting.
Skin Contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.
Eye Contact	Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed</b>
	No additional data available.
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed</b>
	No additional data available.

## 05. FIRE-FIGHTING MEASURES

<b>5.1</b>	<b>Extinguishing Media</b>
	Do not use a direct stream of water to extinguish. Use: Powder. Carbon dioxide (CO <sub>2</sub> ).
<b>5.2</b>	<b>Special hazards arising from the product</b>
	Specific hazards: When heated and in case of fire, toxic vapours/gases may be formed.
<b>5.3</b>	<b>Advice for firefighters</b>
	Protective equipment for fire-fighters: Wear Self-contained breathing apparatus. Wear chemical protective clothing.


## 06. ACCIDENTAL RELEASE MEASURES

<b>6.1</b>	<b>Personal precautions, protective equipment and emergency procedures</b>
	Wear protective clothing as described in Section 8 of this safety data sheet.
<b>6.2</b>	<b>Environmental Precautions</b>
	Do not discharge into drains, water courses or onto the ground.
<b>6.3</b>	<b>Methods and material for containment and cleaning up.</b>
	Absorb with inert, non-combustible, inorganic absorbent material, sweep up and remove to an approved disposal container. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking.
<b>6.4</b>	<b>Reference to other sections</b>
	No additional data available.

## 07. HANDLING AND STORAGE

<b>7.1</b>	<b>Precautions for safe handling</b>
	Avoid spilling, skin and eye contact. Adopt best manual handling considerations when handling, carrying and dispensing.
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities</b>
	Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container. Keep away from heat, sparks and open flame
<b>7.3</b>	<b>Specific end use(s)</b>
	No additional data available

## 08. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>8.1</b>	<b>Control parameters</b>
	Linalool (CAS: 78-70-6) Ingredient Comments: No exposure limits noted for ingredient.
<b>8.2</b>	<b>Exposure controls</b>
Protective Equipment	
	
Process Conditions	Safety shower and eye bath.
Engineering Measures	Provide adequate ventilation. Respiratory equipment. Self-contained breathing apparatus.
Respiratory Equipment	Protection not required if good ventilation is maintained. Use inhalation protection in poorly ventilated areas.
Hand Protection	Use suitable protective gloves if risk of skin contact.
Eye Protection	Wear approved safety goggles.
Other Protection	Wear rubber apron.
Hygiene Measures	Remove contaminated clothing and wash the skin thoroughly with soap and water after work.
Personal Protection	Use personal protection according to Directive 89/686/EEC.
Skin Protection	Wear apron or protective clothing in case of splashes.
Environmental Exposure Controls	Avoid discharging into drainage water. Only eliminate by authorised companies.

## 09. PHYSICAL AND CHEMICAL PROPERTIES

<b>9.1 Information on basic physical and chemical properties</b>	
Appearance	Mobile Liquid,
Colour	Orange to orange-red
Odour	Characteristic
Relative Density @ 20°C	0.838 - 0.850
Flash Point (°C)	>65
Refractive Index @ 20°C	1.468 - 1.480
Melting Point (°C)	No additional data available.
Boiling Point (°C)	176-180
Vapour Pressure	No additional data available.
Solubility in Water @20°C	No additional data available.
Auto-ignition temperature (°C)	No additional data available.

<b>9.2 Other information</b>
No additional data available.

## 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>
No additional data available.
<b>10.2 Chemical stability</b>
Stable under the recommended handling and storage conditions.
<b>10.3 Possible hazardous reactions</b>
No additional data available.
<b>10.4 Conditions to Avoid</b>
Avoid heat, sparks and open flames.
<b>10.5 Incompatible materials</b>
Materials To Avoid: Strong acids, alkali or oxidising agents.
<b>10.6 Hazardous Decomposition Products</b>
In case of fire, dangerous decomposition products can be generated, such as carbon monoxide and dioxide and nitrogen fumes and oxides.

## 11. TOXOLOGICAL INFORMATION

<b>11.1 Information on toxicological effects</b>	
Acute Toxicity	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
Skin corrosion / irritation	May cause sensitisation by skin contact.
Serious eye damage / irritation	Spray and vapour in the eyes may cause irritation and smarting
Respiratory or skin sensitisation	In high concentrations, vapours may irritate throat and respiratory system and cause coughing.
Germ Cell Mutagenicity	No additional data available.
Carcinogenicity	No additional data available.
Reproductive toxicity	No additional data available.
STOT-single exposure	No additional data available.
STOT-repeated exposure	No additional data available.
Photo-toxicity	No additional data available.
Other Information	No additional data available.



## 12. ECOLOGICAL INFORMATION

<b>12.1 Toxicity</b>	The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment
<b>12.2 Persistence &amp; degradability</b>	Degradability: No additional data available.
<b>12.3 Bioaccumulation Potential</b>	Bioaccumulative potential: No data available on bioaccumulation.
<b>12.4 Mobility in soil</b>	No additional data available.
<b>12.5 Results of PBT and vPvB Assessment</b>	No additional data available.
<b>12.6 Other adverse effects</b>	No additional data available.

## 13. DISPOSAL CONSIDERATIONS

<b>13.1 Waste treatment methods</b>	Dispose of in compliance with all local and national regulations.
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## 14. TRANSPORT INFORMATION

<b>14.1 UN number</b>		
UN No. Road		1993
UN No. SEA		1993
UN No. AIR		1993
<b>14.2 UN proper shipping name</b>	None	
<b>14.3 Transport hazard class(es)</b>		
ADR/RID/ADN Class:		9 Miscellaneous dangerous substances and articles.
ICAO Class/Division:		9
IMDG Class:		9
Transport Labels		
<b>14.4 Packing group</b>		
ADR/RID/ADN Packing group		III
IMDG Packing group		III
ICAO Packing group		III
<b>14.5 Environmental hazards</b>	Environmentally Hazardous Substance/Marine Pollutant	
		
<b>14.6 Special precautions for user</b>	EMS F-E-S-D	
	Hazard No. (ADR) 9	



30 Flammable liquid (flash-point between 23°C and 60°C, inclusive) or flammable liquid or solid in the molten state with a flash-point above 60°C, heated to a temperature equal to or above its flash-point, or self heating liquid.
Tunnel Restriction Code (E)
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code</b>
No additional data available.

## 15. REGULATORY INFORMATION

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>
<p>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.</p>
<b>15.2 Chemical safety assessment</b>
No additional information available.

## 16. OTHER INFORMATION

Hazard and/or Precautionary Statements in Full	<p>H319 Causes serious eye irritation. H315 Causes skin irritation. H226 Flammable liquid and vapour. H412 Harmful to aquatic life with long lasting effects. H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects. H410 Very toxic to aquatic life with long lasting effects. H400 Very toxic to aquatic life</p>
Other Information	None.

**DISCLAIMER:** 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 himself as to the suitability of such information for his own particular use.