



## CERTIFICATE OF ANALYSIS

**PRODUCT NAME: NEROLI TUNISIAN NATURAL, ESSENTIAL OIL**

**BATCH NUMBER: 4376002**

PRODUCT INCI: CITRUS AURANTIUM FLOWER OIL

PRODUCT CODE: OENEROTUNI

CAS NUMBER: 8016-38-4 / 72968-50-4

EINECS NUMBER: 277-143-2

MANUFACTURING METHOD: STEAM DISTILLATION

BEST BEFORE END: OCTOBER 2022

ANALYTICAL DETAILS	RANGE	RESULTS
APPEARANCE	LIQUID	-
COLOUR	YELLOW	-
ODOUR	CHARACTERISTIC, FLORAL & FRESH	-
SPECIFIC GRAVITY @ 20°C	0.866 – 0.880	0.873
REFRACTIVE INDEX @ 20°C	1.468 – 1.474	1.469
OPTICAL ROTATION (°C)	+1.0 TO +11.5	+1.0

### STORAGE CONDITIONS

STORE IN A COOL DRY PLACE AWAY FROM HEAT & SUNLIGHT

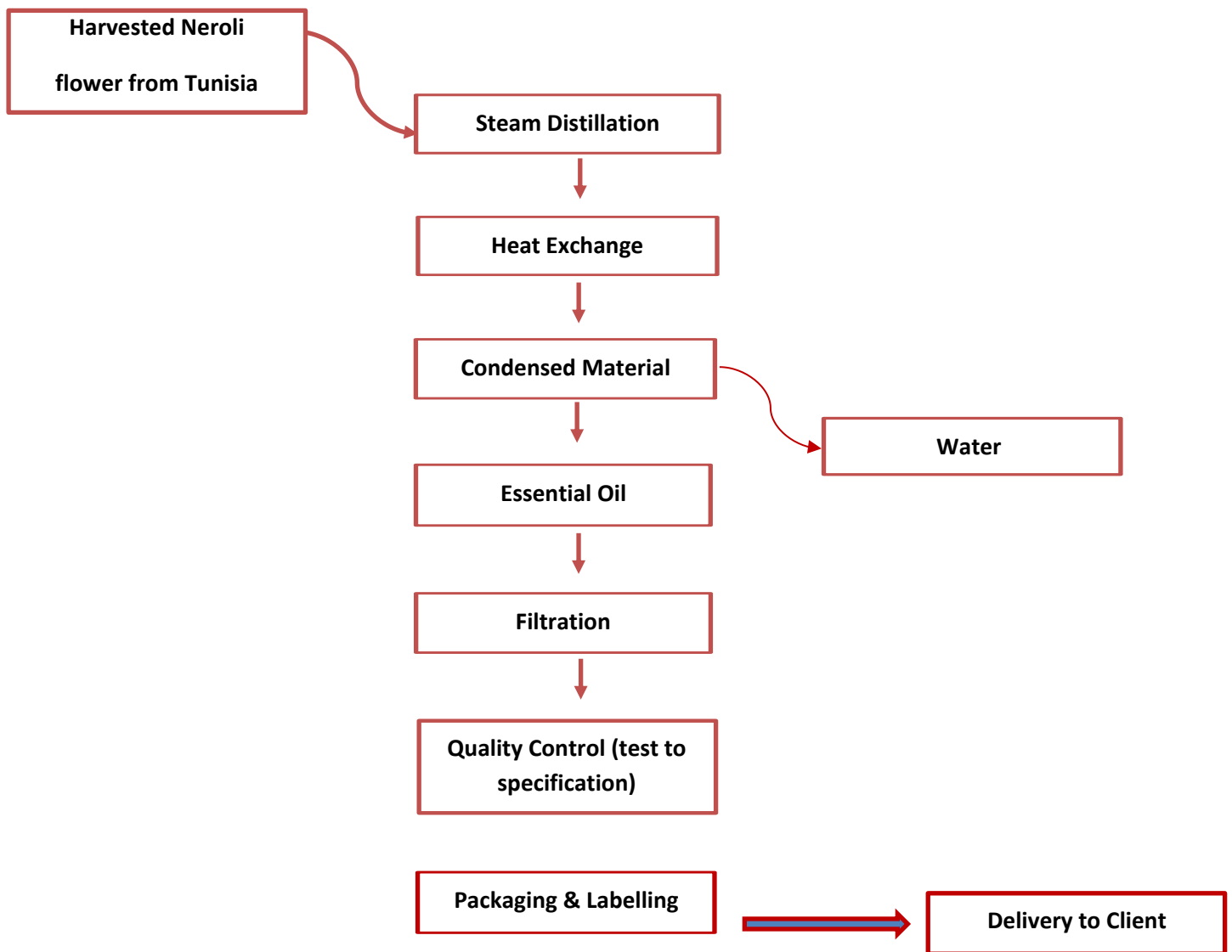


## Allergen Declaration Neroli Tunisia

<b>PRODUCT NAME:</b> Neroli, Essential Oil				
<b>INCI:</b> Citrus Aurantium Flower				
<b>COSMETIC ALLERGENS</b>				
<i>The Following is from the 7th amendment of the cosmetic directive of the European Union Annex II.</i>				
<b>Annex IIIa Reference:</b>		<b>CAS NUMBER:</b>	<b>TOTAL ALLERGEN INCLUSION (%):</b>	
67	AMYL CINNAMAL	122-40-7	0.00	
68	BENZYL ALCOHOL	100-51-6	0.00	
69	CINNAMYL ALCOHOL	104-54-1	0.00	
70	CITRAL	5392-40-5	0.30	
71	EUGENOL	97-53-0	0.00	
72	HYDROXY-CITRONELLAL	107-75-5	0.00	
73	ISOEUGENOL	97-54-1	0.00	
74	AMYL CIN-NAMYL ALCOHOL	101-85-9	0.00	
75	BENZYL SALICYLATE	118-58-1	0.00	
76	CINNAMAL	104-55-2	0.00	
77	COUMARIN	91-64-5	0.00	
78	GERANIOL	106-24-1	3.50	
79	HYDROXY- METHYLPENTYL CYCLOHEXENECARBOXALDEHYDE	31906-04-4	0.00	
80	ANISE ALCOHOL	105-13-5	0.00	
81	BENZYL CINNAMATE	103-41-3	0.00	
82	FARNESOL	4602-84-0	4.00	
83	BUTYLPHENYL METHYLPROPIONAL	80-54-6	0.00	
84	LINALOOL	78-70-6	44.00	
85	BENZYL BENZOATE	120-51-4	0.00	
86	CITRONELLOL	106-22-9	0.00	
87	HEXYL CINNAM-ALDEHYDE	101-86-0	0.00	
88	LIMONENE	5989-27-5	18.00	
89	METHYL HEPTIN CARBONATE	111-12-6	0.00	
90	ALPHA-ISOMETHYL IONONE	127-51-5	0.00	
91	EVERNIA PRUNASTRI EXTRACT	90028-68-5	0.00	
92	EVERNIA FURFURACEA EXTRACT	90028-67-4	0.00	
<b>FOOD ALLERGENS</b>				
<i>The following is from the commission directive 2007/68/EC of 27th November 2007 amending Annex IIIa to Directive 200/13/EC of the European Parliament &amp; Council with regards to specific food ingredients.</i>				
<b>Annex IIIa Reference:</b>		<b>PRESENT IN PRODUCT:</b>	<b>CONTAMINATION PRESENCE:</b>	<b>FACTORY PRESENCE:</b>
1	CEREALS ( CONTAINING GLUTEN )	NO	NO	YES
2	CRUSTACEANS	NO	NO	NO
3	EGGS	NO	NO	NO
4	FISH	NO	NO	NO
5	PEANUTS	NO	NO	YES
6	SOYA	NO	NO	YES
7	MILK	NO	NO	YES
8	NUTS	NO	NO	YES
9	CELERY & CELERIAC	NO	NO	NO
10	MUSTARD	NO	NO	YES
11	SESAME	NO	NO	YES
12	SULPHUR DIOXIDE & SULPHITES	NO	NO	NO
13	LUPIN	NO	NO	NO
14	MOLLUSC	NO	NO	NO

**Manufacturing Flow Chart  
Neroli Tunisia, Essential Oil**

INCI Name	% Inclusion	CAS Number
Citrus Aurantium Flower	100	8016-38-4 / 72968-50-4



The attached information is considered to be correct at the time the client received this information. Please be aware that detail can change and we encourage clients to update their records with MADAR regularly. The information is not and should not be considered a guarantee or warranty, or a part of our contractual or other legal obligations. The information is not to be disclosed to others, reproduced or transmitted in whole or in part without permission from MADAR.



## IFRA STATEMENT

<b>PRODUCT NAME:</b> NEROLI TUNISIA, ESSENTIAL OIL
PRODUCT INCI: CITRUS AURANTIUM FLOWER
PRODUCT CODE: OENEROTUNI
CAS NUMBER: 68916-04-1 / 72968-50-4
EINECS NUMBER: 277-143-2
MANUFACTURING METHOD: STEAM DISTILLATION
SHELF LIFE / BEST BEFORE: 24 MONTHS

MADAR CERTIFY THAT THE ABOVE NAMED MATERIAL CONFORMS TO THE IFRA 48 CODE OF PRACTICE AND CONTAINS THE FOLLOWING RESTRICTED COMPONENTS THAT ARE LISTED IN THE 48<sup>TH</sup> AMENDMENT OF THE IFRA CODE OF PRACTICE:

Restricted Component	Cas No:	% Level in Product	IFRA Standard
Linalool	78-70-6	< 39.6	Specification Std
Limonene	5989-27-5	< 13.9	Specification Std
Citral	5392-40-5	< 0.4	Restriction Stds (QRA cat.)
Eugenol	97-53-0	< 0.1	Restriction Stds (QRA cat.)
Benzyl Salicylate	118-58-1	< 0.1	Restriction Stds (QRA cat.)
Geraniol	106-24-1	< 6.3	Restriction Stds (QRA cat.)
Farnesol	4602-84-0	< 3.5	Restriction Stds (QRA cat.)
Benzyl Benzoate	120-51-4	< 0.1	Restriction Stds (QRA cat.)
Citronellol	106-22-9	< 2.0	Restriction Stds (QRA cat.)
Benzaldehyde	100.52-7	< 0.1	Restriction Stds (QRA cat.)
Carvone	99-49-0	< 0.1	Restriction Stds (QRA cat.)
Perilla Aldehyde	2111-75-3	< 0.1	Restriction Stds (QRA cat.)
Phenyl acetaldehyde	122-78-1	< 0.1	Restriction Stds (QRA cat.)
Trans-2-Hexanal	6728-26-3	< 0.1	Restriction Stds (QRA cat.)
Benzyl Cyanide from Naturals	140-29-4	< 0.1	Prohibition Stds (see below)
Furfural	98-01-1	< 0.1	Restriction Stds (non QRA)



IFRA Classes	% Maximum Use Level
Class 1	1.0
Class 2	1.0
Class 3A, 3B, 3C, 3D	1.0
Class 4A, 4B, 4C, 4D	1.0
Class 5	1.0
Class 6	1.0
Class 7A, 7B	1.0
Class 8A, 8B	1.0
Class 9A	1.0
Class 9B	50.0
Class 9C	50.0
Class 10A	50.0
Class 10B	1.0
Class 11	50.0

**Comments:**

Benzyl Cyanide from Naturals - On the basis of established maximum levels of this substance in commercially available natural sources (like essential oils and extracts), exposure to this substance from the use of these oils and extracts is not significant and the use of these oils authorized as long as the level of benzyl cyanide in the finished product does not exceed 100ppm.

Finished product types	IFRA class
Toys; Lip Products of all types (solid and liquid lipsticks, balms, clear or colored etc...)	Class 1
Deodorant and Antiperspirant products of all types (spray, stick, roll-on, under-arm and body etc...)	Class 2
Hydroalcoholic products applied to recently shaved skin (EdT range)	Class 3.A
Hydroalcoholic products applied to recently shaved skin (fine fragrance range)	Class 3.B
Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc...) including eye cream. Men's Facial Creams and Balms	Class 3.C
Tampons.	Class 3.D
Hydroalcoholic Products applied to unshaved skin (EdT range). Ingredients of Perfume Kits. Scent Strips for Hydroalcoholic Products, "scratch and sniff", other paper products not mentioned elsewhere for which skin exposure is only incidental (e.g. spectacle cleaning tissues).	Class 4.A



Hydroalcoholic Products applied to unshaved skin (Fine Fragrance range).	Class 4.B
Hair Styling Aids and Hair Sprays of all types (pumps, aerosol sprays, etc...); Hair Deodorant. Body Creams, Oils, Lotions of all types (including baby creams, lotions, oils). Fragrance Compounds for Cosmetic Kits, Foot Care Products	Class 4.C
Fragrancing Cream	Class 4.D
Women's Facial Creams/Facial Make-up (excluding eye cream); Facial Masks; Hand Cream	Class 5
Wipes or refreshing tissues for Face, Neck, Hands, Body.	Class 6
Mouthwash, Toothpaste.	Class 6
Intimate Wipes; Baby Wipes.	Class 7 A
Insect Repellent (intended to be applied to the skin).	Class 7 B
Make-up Removers of all types (not including face cleansers). Hair Styling Aids Non-Spray of all types (mousse, gels, leave-in conditioners etc...). Nail Care. All Powders & Talcs (including baby powders and talcs).	Class 8
Liquid Soap, Bar Soap (toilet soap); Depilatory; Conditioner (rinse-off), Shampoos of all types (including baby shampoos).Face Cleansers of all types (washes, gels, scrubs, etc...).Shaving Creams of all types (stick, gels, foams, etc...).Body Washes of all types (including baby washes).Shower Gels of all types; Bath Gels, Foams, Mousses, Salts, Oils and other products added to bathwater	Class 9.A
Feminine hygiene pads / liners.	Class 9.B
'Other' Aerosols (including air fresheners sprays but not including deodorant/antiperspirants, hair styling aids spray).	Class 9.C
Hand wash/Machine wash Laundry Detergents of all types (liquid, powder, tablet, etc...) including Laundry Bleaches. Other Household Cleaning Products (fabric cleaners, soft surface cleaners, carpet cleaners etc...) . Dry Cleaning Kits. Fabric Softeners of all types including fabric softener sheets. Hand Dishwashing Detergent. Hard Surface Cleaners of all types (bathroom and kitchen cleansers, furniture polish etc...). Shampoos for pets	Class 10.A
Diapers. Toilet seat wipes.	Class 10.B
All non-skin contact, including: Air Fresheners and fragrancing of all types (excluding aerosol products): plug-ins, solid substrate, membrane delivery; Toilet blocks; Joss Sticks, Incense; Insecticides (mosquito coil, paper, electrical, etc...excluding aerosols); Plastic articles (excluding toys); Candles; Fuels; Paints; Floor wax; Liquid refills for air fresheners (cartridge system)	Class 11.A
All incidental skin contact, including: Machine Dish wash Detergents and Deodorizers. Machine only Laundry Detergents (e.g. liquid tabs). Deodorizers/Maskers (e.g. fabric drying machine deodorizers, carpet powder). Pot pourri, fragrancing sachets, liquid refills for air fresheners (non-cartridge systems), etc... Shoe polishes; Cat Litter; Animal Sprays (excluding aerosols); Treated Textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics, tights with moisturizers); Odored Distilled Water (that can be added to steam irons).	Class 11.B

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## Material Safety Data Sheet

EU Regulation: 1907/2006

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<b>1.1 PRODUCT IDENTIFICATION</b>					
<b>PRODUCT NAME</b>	NEROLI TUNISIA, ESSENTIAL OIL				
<b>BIOLOGICAL DEFINITION</b>	A NATURAL BLEND OF THE VOLATILE OIL OBTAINED BY STEAM DISTILLATION OF THE FRAGRANT WHITE BLOSSOMS OF THE BITTER ORANGE TREE CITRUS AURANTIUM L. SUBSP. AMARA ENGL.				
<b>INCI NAME</b>	CITRUS AURANTIUM FLOWER				
<b>SYNONYMS &amp; TRADE NAMES</b>	BITTER ORANGE FLOWER OIL, NEROLI OIL TRUE				
<b>INTERNAL PRODUCT CODE</b>	OENEROTUNI				
<b>CAS-No</b>	68916-04-1 / 72968-50-4	<b>EC No.</b>	277-143-2	<b>EINECS No.</b>	277-143-2
<b>1.2 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET</b>					
<b>COMPANY ADDRESS</b>	MADAR CORPORATION LIMITED 19-20 SANDLEHEATH INDUSTRIAL ESTATE, FORDINGBRIDGE, HAMPSHIRE, SP6 1PA.				
<b>EMAIL</b>	SALES@MADARCORPORATION.CO.UK				
<b>1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET</b>					
<b>EMERGENCY CONTACTS</b>	01 425 655555 DURING OFFICE HOURS				


<b>SECTION 2: HAZARDS IDENTIFICATION</b>	
<b>2.1</b> <b>CLASSIFICATION OF THE SUBSTANCE OR MIXTURE</b>	THE FULL TEXT FOR ALL HAZARD STATEMENTS IS DISPLAYED IN SECTION 16.
<b>CLASSIFICATION (67/548/EEC)</b>	NO ADDITIONAL DATA AVAILABLE.
<b>CLASSIFICATION (EU1272/2008)</b>	
<b>2.2</b> <b>LABEL ELEMENTS</b>	LABEL IN ACCORDANCE WITH REGULATION (EC) No 1272/2008.
<b>GHS LABEL</b>	   GHS07                      GHS05                      GHS09
<b>SIGNAL WORD</b>	DANGER.
<b>CONTAINS</b>	601-029-00-7 (R)-P-MENTHA-1,8-DIENE EC 203-377-1 GERANIOL EC 204-872-5 B-PINENE EC 201-291-9 ALPHA-PINENE X EC 203-375-0 CITRONELLOL EC 225-004-1 FARNESOL.
<b>HAZARDS STATEMENT</b>	H317 MAY CAUSE AN ALLERGIC SKIN REACTION. H318 CAUSES SERIOUS EYE DAMAGE. H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.
<b>PRECAUTIONARY STATEMENTS</b>	P272 CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE. P273 AVOID RELEASE TO THE ENVIRONMENT. P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION. P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.
<b>SUPPLEMENTARY PRECAUTIONARY STATEMENTS</b>	P501 DISPOSE OF CONTENTS/CONTAINER TO ...
SECTION 16 (OTHER INFORMATION): RISK & SAFETY PHRASES IN FULL.	
<b>2.3</b> <b>OTHER HAZARDS</b>	
<b>ADVERSE PHYSIO-CHEMICAL PROPERTIES</b>	TOXIC TO AQUATIC LIFE.
<b>ADVERSE EFFECTS ON HUMAN HEALTH</b>	MAY BE HARMFUL IF SWALLOWED MAY BE HARMFUL IN CONTACT WITH SKIN.
<b>PBT OR VPVB ACCORDING TO ANNEX XIII</b>	NO DATA.
<b>SECTION 3: COMPOSITION OF INGREDIENTS</b>	
<b>3.1</b> <b>SUBSTANCES</b>	NONE.
<b>3.2</b> <b>MIXTURES</b>	< 39.6% LINALOOL CAS-NO.: 78-70-6 EC NO.: 201-134-4 CLASSIFICATION (EC 1272/2008) ACUTE TOX. 5 - H303, SKIN IRRIT. 2 - H315, AQUATIC ACUTE 3 - H402  10.0 – 25.0% LINALYL ACETATE CAS: 115-95-7, EC: 204-116-4



	<p>CLASSIFICATION (EC 1272/2008) SKIN IRRIT. 2, H315; EYE IRRIT. 2, H319</p> <p>&lt; 13.9% (R)-P-MENTHA-1,8-DIENE CAS: 5989-27-5, EC: 227-813-5          CLASSIFICATION (EC 1272/2008) FLAM. LIQ. 3, H226, SKIN IRRIT. 2, H315, SKIN SENS. 1, H317, AQUATIC ACUTE 1, H400          M ACUTE = 1, AQUATIC CHRONIC 1, H410 M CHRONIC = 1</p> <p>2.5 - 10.0% NEROL CAS: 106-25-2, EC: 203-378-7          CLASSIFICATION (EC 1272/2008) EYE IRRIT. 2, H319, SKIN IRRIT. 2, H315</p> <p>&lt; 6.3% GERANIOL CAS: 106-24-1, EINECS: 203-377-1          CLASSIFICATION (EC 1272/2008) EYE DAM. 1, H318; SKIN IRRIT. 2, H315; SKIN SENS. 1, H317</p> <p>2.5 - 10.0% B-PINENE CAS: 127-91-3, EC: 204-872-5          CLASSIFICATION (EC 1272/2008) ASP. TOX. 1, H304, FLAM. LIQ. 3, H226, SKIN IRRIT. 2, H315, SKIN SENS. 1, H317</p> <p>2.5 - 10.0% TERPYNYL ACETATE CAS: 80-26-2, EC: 201-265-7          CLASSIFICATION (EC 1272/2008) AQUATIC CHRONIC 2, H411</p> <p>2.5 - 10.0% ALPHA-PINENE X CAS: 80-56-8, EC: 201-291-9          CLASSIFICATION (EC 1272/2008) ASP. TOX. 1, H304, FLAM. LIQ. 3, H226, SKIN IRRIT. 2, H315, SKIN SENS. 1, H317</p> <p>&lt; 2.0% CITRONELLOL CAS-No.: 106-22-9 EC No.: 203-375-0          CLASSIFICATION (EC 1272/2008) EYE IRRIT. 2, H319, SKIN IRRIT. 2, H315, SKIN SENS. 1, H317</p> <p>2.5 - 10.0% NEROLIDOL (ISOMER UNSPECIFIED) CAS: 7212-44-4, EINECS: 230-597-5          CLASSIFICATION (EC 1272/2008) EYE IRRIT. 2, H319, AQUATIC ACUTE 1, H400 M ACUTE = 1, AQUATIC CHRONIC 1, H410          M CHRONIC = 1</p> <p>2.5 - 10.0% GERANYL ACETATE CAS-No.: 105-87-3 EC No.: 203-341-5          CLASSIFICATION (EC 1272/2008) SKIN IRRIT. 2, H315; SKIN SENS. 1B, H317; AQUATIC CHRONIC 3, H412</p> <p>&lt; 3.5% FARNESOL CAS: 4602-84-0, EINECS: 225-004-1          CLASSIFICATION (EC 1272/2008) EYE IRRIT. 2, H319, SKIN IRRIT. 2, H315, SKIN SENS. 1, H317</p> <p>2.5 - 10.0% TERPINEOL CAS: 8000-41-7, EINECS: 232-268-1          CLASSIFICATION (EC 1272/2008) EYE IRRIT. 2, H319, SKIN IRRIT. 2, H315</p>
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<b>SECTION 4: FIRST AID MEASURES</b>	
<b>4.1</b>	
<b>DESCRIPTION OF FIRST AID MEASURES</b>	
<b>GENERAL INFORMATION</b>	ALWAYS REMOVE CONTAMINATED CLOTHING IMMEDIATELY.
<b>INHALATION</b>	GET MEDICAL ATTENTION IMMEDIATELY. REMOVE FROM EXPOSURE SITE TO FRESH AIR, KEEP AT REST, AND OBTAIN MEDICAL ATTENTION.
<b>INGESTION</b>	GET MEDICAL ATTENTION IMMEDIATELY. IMMEDIATELY CALL THE DOCTOR. RINSE MOUTH WITH WATER AND OBTAIN MEDICAL ATTENTION.
<b>SKIN CONTACT</b>	REMOVE CONTAMINATED CLOTHES. WASH THOROUGHLY WITH SOAP AND WATER. CONTACT PHYSICIAN IF IRRITATION PERSISTS.
<b>EYE CONTACT</b>	FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. CONTACT PHYSICIAN IF SYMPTOMS PERSIST.
4.2 MOST IMPORTANT SYMPTOMS & EFFECTS (ACUTE & DELAYED)	INHALATION : CAN CAUSE SLIGHT HEADACHE. SKIN CONTACT : CAN CAUSE SLIGHT SKIN RASH. EYE CONTACT : CAN CAUSE BLOODSHOT EYES.
4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION OR SPECIAL TREATMENT REQUIRED	IMMEDIATE MEDICAL ASSISTANCE : SEE POINT 4.1. IMMEDIATE / SPECIAL TREATMENT: SEE POINT 4.1. FIRST AID SPECIFIC MEANS : EYE WASH FOUNTAIN / SAFETY SHOWER SHOULD BE AVAILABLE IN THE WORK AREA.

<b>SECTION 5: FIRE FIGHTING MEASURES</b>																			
<b>5.1 EXTINGUISHING MATERIAL</b>	FOAM, CO2, DRY CHEMICAL POWDER.																		
<b>5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE</b>	BURNING PRODUCES IRRITATING, TOXIC AND OBNOXIOUS FUMES																		
<b>5.3 ADVICE FOR FIRE-FIGHTERS</b>	SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND APPROPRIATE PROTECTIVE CLOTHING.																		
<b>SECTION 6: ACCIDENTAL RELEASE MEASURES</b>																			
<b>6.1 PERSONAL PRECAUTIONS</b>	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. AVOID INHALATION.																		
<b>6.2 ENVIRONMENTAL PRECAUTIONS</b>	DO NOT DISCHARGE INTO DRAINS, WATER COURSES OR ONTO THE GROUND. DISPOSE OF IN LINE WITH LOCAL AUTHORITY GUIDELINES.																		
<b>6.3 METHODS &amp; MATERIAL FOR CONTAINMENT AND CLEANING UP</b>	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. COVER WITH AN INERT, INORGANIC, NON-COMBUSTIBLE ABSORBENT MATERIAL (E.G DRY-LIME, SAND, SODA ASH).																		
<b>6.4 REFERENCES TO OTHER SECTIONS</b>	REFER & CONSIDER SECTION 12.																		
<b>SECTION 7: HANDLING &amp; STORAGE</b>																			
<b>7.1 PRECAUTIONS FOR SAFE-HANDLING</b>	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.																		
<b>7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b>	STORAGE CLASS: FLAMMABLE LIQUID STORAGE. STORE ONLY IN THE ORIGINAL RECEPTACLE. KEEP CONTAINER TIGHTLY SEALED. KEEP IN COOL, DRY, VENTILATED STORAGE AND CLOSED CONTAINERS. KEEP AWAY FROM HEAT.																		
<b>7.3 SPECIFIC END USE(S)</b>	RISK MANAGEMENT METHODS (RMM) THE INFORMATION REQUIRED IS CONTAINED IN THIS MATERIAL SAFETY DATA																		
<b>SECTION 8: EXPOSURE CONTROLS &amp; PERSONAL PROTECTION</b>																			
<b>8.1 CONTROL PARAMETERS</b>	<p><b>Occupational exposure limits :</b></p> <p><b>-ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :</b></p> <table border="1"> <thead> <tr> <th>CAS</th> <th>TWA :</th> <th>STEL :</th> <th>Ceiling :</th> <th>Definition :</th> <th>Criteria :</th> </tr> </thead> <tbody> <tr> <td>127-91-3</td> <td>20 ppm</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>80-56-8</td> <td>20 ppm</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :	127-91-3	20 ppm	-	-	-	-	80-56-8	20 ppm	-	-	-	-
CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :														
127-91-3	20 ppm	-	-	-	-														
80-56-8	20 ppm	-	-	-	-														
<b>8.2 EXPOSURE CONTROLS</b>																			

	
<b>EYE PROTECTION</b>	WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION. AVOID CONTACT WITH EYES. WEAR APPROVED SAFETY GOGGLES. (EN166)
<b>HAND PROTECTION</b>	AVOID CONTACT WITH SKIN. WASH HANDS BEFORE BREAKS AND AT END OF WORK. WEAR PROTECTIVE GLOVES. DIN/EN 374. THE GLOVE MATERIAL HAS TO BE IMPERMEABLE AND RESISTANT TO THE PRODUCT/ THE SUBSTANCE/ THE PREPARATION. PENETRATION TIME OF GLOVE MATERIAL: THE EXACT BREAK THROUGH TIME HAS TO BE FOUND OUT BY THE MANUFACTURER OF THE PROTECTIVE GLOVES AND HAS TO BE OBSERVED.
<b>RESPIRATORY EQUIPMENT</b>	DO NOT INHALE GASES / FUMES / AEROSOLS. CERTIFIED RESPIRATORY PROTECTIVE DEVICE RECOMMENDED.
<b>HYGIENE MEASURES</b>	GOOD PERSONAL HYGIENE PRACTICES ARE ALWAYS ADVISABLE, ESPECIALLY WHEN WORKING WITH CHEMICALS / OILS.
<b>ENGINEERING MEASURES</b>	NONE.
<b>SKIN PROTECTION</b>	WEAR PROTECTIVE CLOTHING TO REDUCE THE RISK OF SKIN AND EYE CONTACT.
<b>PERSONAL PROTECTION</b>	AVOID INHALATION OF THE PRODUCT. AVOID CONTACT WITH SKIN AND EYES. AVOID CONTACT WITH SKIN AND EYES. USE PERSONAL PROTECTION ACCORDING TO DIRECTIVE 89/686/EEC.
<b>OTHER PROTECTION</b>	WEAR SUITABLE PROTECTION TO AVOID CONTACT WITH SKIN AND EYES. DO NOT INHALE VAPOURS.
<b>PROCESS CONDITIONS</b>	ENSURE AREA IS WELL VENTILATED. AVOID VAPOUR INHALATION. SAFETY SHOWER & EYE BATH.
<b>ENVIRONMENTAL EXPOSURE CONTROLS</b>	AVOID DISCHARGING INTO DRAINAGE WATER.

## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES



<b>9.1</b> <b>PHYSICAL &amp; CHEMICAL PROPERTIES</b>	
<b>APPEARANCE</b>	LIQUID
<b>COLOUR</b>	COLOURLESS TO PALE YELLOW.
<b>ODOUR</b>	CHARACTERISTIC, STRONG NEROLI NOTE. FRESH & FLORAL
<b>RELATIVE DENSITY @ 20°C</b>	0.866 TO 0.880 @ 20°C
<b>FLASH POINT (°C)</b>	61 °C.
<b>REFRACTIVE INDEX @ 20 °C</b>	1.468 TO 1.474 @ 20°C
<b>SOLUBILITY IN WATER @ 20 °C</b>	INSOLUBLE IN WATER
<b>9.2</b> <b>OTHER INFORMATION</b>	NO DATA.

## SECTION 10: STABILITY & REACTIVITY

<b>10.1</b> <b>REACTIVITY</b>	NO DATA.
<b>10.2</b> <b>CHEMICAL STABILITY</b>	STABLE UNDER SUGGESTED STORAGE CONDITIONS (<15°C).
<b>10.3</b> <b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	NONE UNDER NORMAL PROCESSING.
<b>10.4</b> <b>CONDITIONS TO AVOID</b>	STORAGE AT HIGH TEMPERATURES. DO NOT STORE ABOVE 15°C. AVOID HEAT, FLAMES AND OTHER SOURCES OF IGNITION.
<b>10.5</b> <b>INCOMPATIBLE MATERIALS</b>	AVOID CONCENTRATED ACIDS, ALKALIS & OXIDISING AGENTS.
<b>10.6</b> <b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	THIS PRODUCT DOES NOT DECOMPOSE UNDER NORMAL CONDITIONS. UNDER FIRE CONDITIONS THE PRODUCT WILL PRODUCE A MIXTURE OF IRRITATING FUMES & SMOKE & CARBON MONOXIDE.

<b>SECTION 11: TOXICOLOGICAL INFORMATION</b>	
<b>11.1 TOXICOLOGICAL EFFECTS</b>	
<b>ACUTE TOXICITY</b>	<p>ACUTE TOXICITY :            TERPINEOL (CAS: 8000-41-7)            ORAL ROUTE : LD50 = 4300 MG/KG</p> <p>CITRONELLOL (CAS: 106-22-9)            ORAL ROUTE : LD50 = 2650 MG/KG            DERMAL ROUTE : LD50 = 2650 MG/KG</p> <p>ALPHA-PINENE X (CAS: 80-56-8)            ORAL ROUTE : LD50 = 3700 MG/KG</p> <p>GERANIOL (CAS: 106-24-1)            ORAL ROUTE : LD50 = 4200 MG/KG</p> <p>NEROL (CAS: 106-25-2)            ORAL ROUTE : LD50 = 4500 MG/KG            LINALOOL (CAS: 78-70-6)            ORAL ROUTE : LD50 = 3000 MG/KG.</p>
<b>SKIN IRRITATION</b>	<p>MAY CAUSE AN ALLERGIC REACTION BY SKIN CONTACT.            CORROSIVITY : NO OBSERVED EFFECT.</p>
<b>EYE DAMAGE OR IRRITATION</b>	<p>MAY HAVE IRREVERSIBLE EFFECTS ON THE EYES, SUCH AS TISSUE DAMAGE IN THE EYE, OR SERIOUS PHYSICAL DECAY OF SIGHT, WHICH IS NOT FULLY REVERSIBLE BY THE END OF OBSERVATION AT 21 DAYS.            SERIOUS EYE DAMAGE IS TYPIFIED BY THE DESTRUCTION OF CORNEA, PERSISTENT CORNEAL OPACITY AND IRITIS.</p>
<b>RESPIRATORY OR SKIN SENSITIVITY</b>	HAZARD STATEMENT: H317 MAY CAUSE AN ALLERGIC SKIN REACTION.
<b>GERM CELL MUTAGENICITY</b>	NO DATA.
<b>CARCINOGENICITY</b>	CAS 5989-27-5 : IARC GROUP 3 : THE AGENT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY TO HUMANS.
<b>REPRODUCTIVE TOXICITY</b>	NO DATA.
<b>STOT – SINGLE EXPOSURE</b>	NO DATA.
<b>STOT – REPEATED EXPOSURE</b>	NO DATA.
<b>ASPIRATION HAZARD</b>	HAZARD STATEMENT: H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
<b>OTHER INFORMATION</b>	NO DATA.
<b>SECTION 12: ECOLOGICAL INFORMATION</b>	
<b>12.1 TOXICITY</b>	<p>TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.            THE PRODUCT MUST NOT BE ALLOWED TO RUN INTO DRAINS OR WATERWAYS.</p>
<b>12.2 PERSISTENCE &amp; DEGRADABILITY</b>	<p>CITRONELLOL (CAS: 106-22-9).            BIODEGRADABILITY : NO DEGRADABILITY DATA IS AVAILABLE, THE SUBSTANCE IS CONSIDERED AS NOT DEGRADING QUICKLY.</p>
<b>12.3 BIO- ACCUMULATIVE POTENTIAL</b>	CITRONELLOL (CAS: 106-22-9)
<b>12.4 MOBILITY IN SOIL</b>	OCTANOL/WATER PARTITION COEFFICIENT : $3 \leq \log K_{ow} < 4$ .
<b>12.5 RESULTS OF PBT &amp; VPVB ASSESSMENT</b>	NO DATA.
<b>12.6 OTHER ADVERSE EFFECTS</b>	NO DATA.
<b>SECTION 13: DISPOSAL INFORMATION</b>	

<b>13.1</b> <b>WASTE TREATMENT METHODS</b>	ALWAYS RECOVER SPILLED PRODUCT. DISCARD WASTE MATERIAL WITH AUTHORIZED WASTE MANAGEMENT SERVICES. ACT IN ACCORDANCE WITH LOCAL & NATIONAL WASTE REGULATIONS.
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<b>SECTION 14: TRANSPORT INFORMATION</b>	
<b>14.1</b> <b>TRANSPORT INFORMATION</b>	
	<b>UN NUMBER</b> <b>ROAD:</b> UN 3082 <b>SEA:</b> UN 3082 <b>AIR:</b> UN 3082
<b>14.2</b> <b>UN SHIPPING NAME</b>	<b>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</b> <b>((R)-P-MENTHA-1,8-DIENE).</b>
<b>14.3</b> <b>TRANSPORT HAZARD CLASS(ES)</b>	<b>ADR/RID/ADN CLASS: 9</b> <b>ADR/RID/ADN CLASS: 9</b> <b>MISCELLANEOUS DANGEROUS SUBSTANCES AND ARTICLES.</b> <b>IMDG CLASS 9</b> <b>ICAO CLASS/DIVISION 9</b>  <b>TRANSPORT LABELS</b>  
<b>14.4</b> <b>PACKING GROUP</b>	<b>ADR/RID/ADN PACKING GROUP III</b> <b>IMDG PACKING GROUP III</b> <b>ICAO PACKING GROUP III</b>
<b>14.5</b> <b>ENVIROMENTAL HAZARDS</b>	<b>ENVIRONMENTALLY HAZARDOUS / MARINE POLLUTANT.</b>  

<b>14.6</b> <b>SPECIAL PRECAUTIONS FOR USER</b>	<b>ADR/RID</b>	Class	Code	Packgr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
		9	M6	III	9	90	5 L	274 335 375 601	E1	3	E
	<b>IMDG</b>	Class	2 <sup>nd</sup> Label	Pack gr.	LQ	EMS	Provis.	EQ			
		9	-	III	5 L	F-A,S-F	274 335 969	E1			
<b>14.7</b> <b>TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 &amp; THE IBC CODE.</b>	<b>IATA</b>	Class	2 <sup>nd</sup> Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
		9	-	III	964	450 L	964	450 L	A97	E1	
									A158		
									A197		
									A158		
									A197		
<p>Not subject to this regulation if Q &lt;= 5 l / 5 kg (IATA 4.4.4 - DS A197)</p> <p>For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.</p> <p>For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.</p>											
<b>14.7</b> <b>TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 &amp; THE IBC CODE.</b>											
<i>No DATA.</i>											
<b>SECTION 15: REGULATORY INFORMATION</b>											
<b>15.1</b> <b>PRODUCT SPECIFIC SAFETY, HEALTH &amp; ENVIRONMENTAL REGULATIONS &amp; LEGISLATION</b>											
<b>EU DIRECTIVES</b>											
REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 18 <sup>TH</sup> 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).											
<b>STATUTORY INSTRUMENTS</b>											
THE CHEMICALS (HAZARD INFORMATION & PACKAGING FOR SUPPLY REGULATIONS 2009 (S.I.2009 NO 716).											
<b>APPROVED CODE OF PRACTICE</b>											
CLASSIFICATION & LABELLING OF SUBSTANCES & PREPARATIONS DANGEROUS FOR SUPPLY. SAFETY DATA SHEETS FOR SUBSTANCES & PREPARATIONS.											
<b>GUIDANCE NOTES</b>											
WORKPLACE EXPOSURE LIMITS EH40. CHIP FOR EVERYONE HSG 108.											
<b>15.2</b> <b>CHEMICAL SAFETY ASSESSMENT</b>											
ASSESSMENT HAS NOT BEEN CARRIED OUT AS THIS IS A NON-HAZARDOUS MATERIAL ACCORDING TO ARTICLE 31 OF REACH 1907/2006.											

**SECTION 16: OTHER INFORMATION**



HAZARD AND/ OR PRECAUTIONARY STATEMENTS IN FULL	<p>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.  H318 CAUSES SERIOUS EYE DAMAGE.  H319 CAUSES SERIOUS EYE IRRITATION.  H400 VERY TOXIC TO AQUATIC LIFE.  H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.  H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.  H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS</p>
<b>TRAINING INSTRUCTIONS: REFER TO POSSIBLE HAZARD BEFORE USE OF THIS PRODUCT.</b>	
<b>ABBREVIATIONS &amp; ACRONYMS:</b>	
<b>MSDS</b>	MATERIAL SAFETY DATA SHEET.
<b>INCI</b>	INTERNATIONAL NOMENCLATURE OF COSMETIC INGREDIENTS.
<b>CAS</b>	CHEMICAL ABSTRACT SERVICE.
<b>IMDG</b>	INTERNATIONAL MARITIME CODE FOR DANGEROUS GOODS.
<b>ADR</b>	ACCORD EUROPEAN SUR LE TRANSPORT DES MARCHANDISES DANGEREUSES PAR ROUTE (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD).
<b>RID</b>	INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY RAIL.
<b>ICAO</b>	INTERNATIONAL CIVIL AVIATION ORGANIZATION.
<b>ADN</b>	INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS.
<b>GHS</b>	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION & LABELLING OF CHEMICALS.
<b>TREM CARD</b>	TRANSPORT EMERGENCY CARD.
<b>STOT</b>	SPECIFIC TARGET ORGAN TOXICITY.

### DOCUMENTATION REVISION

DATE	CHANGE DESCRIPTION
10 <sup>TH</sup> APRIL 2018	DATA LAUNCH

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## SPECIFICATION SHEET

**PRODUCT NAME:** NEROLI TUNISIA ESSENTIAL OIL

PRODUCT INCI: CITRUS AURANTIUM FLOWER

PRODUCT CODE: OENEROTUNI

CAS NUMBER: 8016-38-4 / 72968-50-4

EINECS NUMBER: 277-143-2

MANUFACTURING METHOD: STEAM DISTILLATION

SHELF LIFE / BEST BEFORE: 24 MONTHS

ANALYTICAL DETAILS	RANGE
APPEARANCE	LIQUID
COLOUR	YELLOW
ODOUR	CHARACTERISTIC, FLORAL & FRESH
SPECIFIC GRAVITY @ 20°C	0.866 – 0.880
REFRACTIVE INDEX @ 20°C	1.468 – 1.474
OPTICAL ROTATION (°C)	+1.0 TO +11.5

### STORAGE CONDITIONS

STORE IN A COOL DRY PLACE AWAY FROM HEAT & SUNLIGHT

### DOCUMENTATION REVIEW DATE:

24<sup>TH</sup> MAY 2018

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