



# NEW DIRECTIONS AROMATICS

## MATERIAL SAFETY DATA SHEET

### SECTION: 1.1 PRODUCT IDENTIFICATION

**Product Name:** Orange Bitter Essential Oil  
**Botanical Name:** *Citrus aurantium amara*  
**Synonyms:** *Citrus bigarradia*, *Citrus vulgaris*, *Citrus aurantium var aurantium*  
**INCI Name:** Citrus aurantium amara (orange) peel oil  
**CAS #:** 68916-04-1  
**Country of Origin:** Italy

### SECTION: 1.2 COMPANY IDENTIFICATION

**Company:** New Directions Aromatics Inc.  
**Address:** 6781 Columbus Road, Mississauga, ON., L5T 2G9, Canada  
**Telephone No:** 905-840-5459  
**FAX:** 905-846-1784

**24 HOUR EMERGENCY TELEPHONE NUMBER: (613)-996-6666 CANUTEC**

### SECTION: 2. COMPOSITION / INFORMATION INGREDIENTS

**Contents:** Limonene, myrcene, camphene, pinene, ocimene, cymene  
**Composition:**

Chemical Name	CAS #	EINECS#	Proportions [%w/w]
d-Limonene:	5989-27-5	277-143-2	> 90 %

### SECTION: 3. HAZARDS IDENTIFICATION

**Slightly Hazardous Limonene:** may be irritating to skin and eyes.  
**Medical Information:** N/A

### SECTION: 4. FIRST AID MEASURES

**Eye Contact:** Contact with eyes can produce burning sensation. Irrigate with water immediately, continue flushing eyes with water for 15 minutes. Seek medical attention if irritation persists.

**Inhalation:** Remove to fresh air. Give oxygen if breathing is labored and seek medical advice. Avoid casual breathing. Signs of over exposure are dizziness and nausea.

**Ingestion:** Rinse mouth; dilute with milk or water and consult a physician immediately. Do not induce vomiting. Never-give anything by mouth if victim is unconscious, is rapidly-losing or is Convulsing.

**Skin Contact:** Skin contact can produce irritation, or itching of the skin. Remove contaminated clothing. Wash with soap and plenty of water. Seek medical attention if irritation persists.

### SECTION: 5. FIRE FIGHTING MEASURES

**Flammable Limits:** Flash Point 46 °C  
**Extinguishing media:** Carbon Dioxide, dry chemical or foam. DO NOT USE direct water jet on burning material.  
**Special Procedures:** Determine the need to evacuate or isolate the area according to your local emergency plan.  
**Unusual Firefighting Hazards:** None identified.  
**Protective Equipment:** Self-contained breathing apparatus and protective clothing should be worn when fighting fires involving essential oils or chemicals.



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**Combustion Product:** Carbon Monoxide, Carbon Dioxide

**SECTION: 6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Use of self-contained breathing apparatus is recommended for any major chemical spill. Refer also to section 8.

**Safety Precautions:** Eliminate all ignition sources. Ventilate area. Determine the need to evacuate or isolate the area according to your local emergency plan.

**Environmental Precautions:** Keep away from drains, surface and ground water. Report spills to appropriate Authorities if required.

**Methods For Cleaning Up:** Contain and collect with inert absorbent material and place in suitable container for disposal. Comply with all federal, state, and local regulation. Wipe small spills with cloth. Clean with hot water and detergent.

**SECTION: 7. HANDLING AND STORAGE**

**Handling:** Avoid inhalation and contact with skin and eyes. Good personal hygiene practices should be used. Wash after any contact, before breaks and meals and at the end of the work period. Contaminated clothing and shoes should be cleaned before re-use.

**Storage:** Containers should be kept closed in order to minimize contamination. Store in a cool, dry, well ventilated place protected from light. Keep away from extreme heat and from freezing conditions and away from all sources of ignition. Make sure the material does not come into contact with substances listed as: "Materials to Avoid".

**SECTION: 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Eyes Protection:** The use of safety glasses is recommended. If a material is to be handled in a manner where splashing may occur, the use of splash goggles or face shield is recommended.

**Respiratory Protection:** In well- ventilated areas, respiratory protection is not normally required. In confined, poorly ventilated areas the use of "NIOSH" approved respiratory protection normally required (use only if trained in proper use and with acceptable oxygen level).

**Protective Gloves:** Using chemical resistant gloves is recommended.

**Protective Clothing:** Using chemical resistant clothing is recommended.

**Protective Equipment:** An eyewash fountain and / or safety shower should be available in the work area. Acceptable industrial hygiene practices should be maintained.

**Note:** These precautions are for room temperature handling. Use at elevated temperature or aerosol / spray applications may require additional precautions.

**SECTION: 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Yellowish to orange liquid.

**Odor:** Characteristic bitter orange citrus odor.

**Solubility:** Soluble in alcohol and oils. Insoluble in water.

**Specific Gravity:** 0.850 – 0.860 @ 20°C

**Optical Rotation:** +85 - +95 @ 20°C

**Refractive Index:** 1.4730 – 1.4745 @ 20°C

**Extraction Method:** Cold-pressed of the ripe orange peel.

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**SECTION: 10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Chemically stable. This material presents no significant reactivity hazard.
<b>Conditions to Avoid:</b>	Avoid sparks, flame and excessive heat.
<b>Materials to Avoid:</b>	Strong oxidizing agents.
<b>Flammability:</b>	Combustible liquid.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Hazardous Combustion or Decomposition Products:</b>	None known.

**SECTION: 11. TOXICOLOGICAL INFORMATION**

<b>Toxicological Limits:</b>	Oral (rats), LD <sub>50</sub> > 5 g/kg	Dermal (rabbits), LD <sub>50</sub> > 5 g/kg
	May be irritating to eyes and skin due to its high limonene content. Possibly permeable to skin.	
<b>Inhalation:</b>	Inhalation of high concentrations of vapor may result in irritation of eyes, nose and throat, headache, nausea, and dizziness.	
<b>Skin Contact:</b>	Repeated or prolonged contact can cause redness, irritation and scaling of skin (Dermatitis). Adverse skin effects should be prevented by normal care and personal hygiene.	
<b>Eye Contact:</b>	May irritate eyes.	
<b>Ingestion:</b>	Low order toxicity causing irritation of the stomach and intestines which results in nausea and vomiting.	
<b>Medical Conditions Aggravated by Exposure:</b>	May aggravate dermatitis, psoriasis and other skin conditions.	
<b>Chronic Toxicity:</b>	May cause allergic reactions on skin	
<b>Carcinogenicity Data:</b>	None of the components of this material are listed as a carcinogen.	
<b>Reproductive Toxicity:</b>	No adverse effects on reproduction are known.	
<b>Acute Toxicity Values:</b>	No data is currently available.	

**SECTION: 12. ECOLOGICAL INFORMATION**

Very toxic to aquatic organism may cause long-term adverse effects in the aquatic environment. Avoid any pollution of ground, surface or underground water.

**SECTION: 13. DISPOSAL CONSIDERATION**

Incineration or sanitary landfill in accordance with local, provincial and federal regulations. Check with disposal expert to insure compliance.

**SECTION: 14. TRANSPORT INFORMATION**

<b>Chemical Identification:</b>	
<b>UN No.</b>	1169: Extracts, Aromatics Liquids.
<b>Packaging</b>	Group: III Class: 3
<b>EINECS: N/A</b>	<b>FEMA: N/A</b> <b>FDA: N/A</b>
<b>US DOT Shipping (Land):</b>	Check appropriate authority
<b>IATA Shipping (Air):</b>	Check appropriate authority
<b>IMDG Shipping (Marine):</b>	Check appropriate authority

**SECTION: 15. REGULATORY INFORMATION**

<b>WHMIS (Canada):</b>	Class D2B/B3 – Combustible liquid with flash point between 37.8°C (100°F) and 46 °C (200°F).
<b>HMIS (USA):</b>	Health Hazard – N/A Fire Hazard – N/A Reactivity – N/A



## MATERIAL SAFETY DATA SHEET

**SARA 302/ SARA 313:** None  
**California Proposition 65:** This product does not contain chemical listed per the Safe Drinking Water and Enforcement Act of 1986.

<b>SECTION: 16. OTHER INFORMATION</b>
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**Revision Date: March 19, 2012**

<b>SECTION: 17. DISCLAIMER</b>
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# NEW DIRECTIONS AROMATICS

## CERTIFICATE OF ANALYSIS

**Product:** Orange Bitter Essential Oil

**Lot No.:** 11105-A05

**Best Before:** November, 2012

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
<b>Appearance:</b>	Yellowish to orange liquid.	Complies
<b>Odor:</b>	Characteristic bitter orange citrus odor.	Complies
<b>Solubility:</b>	Soluble in alcohol and oils. Insoluble in water.	Complies
<b>Specific Gravity:</b>	0.850 – 0.860 @ 20°C	0.8515
<b>Optical Rotation:</b>	+85 - +95 @ 20°C	+92.30
<b>Refractive Index:</b>	1.4730 – 1.4745 @ 20°C	1.4738
<b>d-Limonene:</b>	> 90 %	Complies
<b>Aldehydes</b>	1.80%	1.80%

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