

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	Grapefruit Essence Oil
<b>Other means of identification</b>	None.
<b>Recommended use</b>	To re-packers and/or re-processors for use in foods, chemicals or cosmetics.
<b>Recommended restrictions</b>	Uses other than the recommended use.

## Manufacturer/Importer/Supplier/Distributor information

<b>Manufacturer</b>	Rio Grande Juice Company
<b>Address</b>	702 E Interstate Hwy 2
	Mission, TX 78572
	United States of America
<b>Telephone</b>	956-598-6800
<b>Emergency telephone</b>	Global Incident Response Hotline +1 866 519 4752 +1 760 476 3961 Access Code: 14566

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 3
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Sensitization, skin	Category 1
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 3
<b>OSHA defined hazards</b>	Not classified.	

## Label elements



### Signal word

Danger

### Hazard statement

Flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### Precautionary statement

#### Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist/vapors. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use water fog, alcohol resistant foam, dry chemical powder, carbon dioxide to extinguish. Collect spillage.

#### Storage

Store in a well-ventilated place. Keep cool. Store locked up.

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
d-Limonene	5989-27-5	90 - 100
Decanal	112-31-2	0.05 - 2.2
alpha-Pinene	80-56-8	0.7 - 1.5
Myrcene	123-35-3	0.85 - 1.2
Nootkatone	4674-50-4	0.01 - 1.3

**Composition comments** The exact percentage (concentration) of composition has been withheld as a trade secret. All concentrations are in percent by weight.

### 4. First-aid measures

#### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

#### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

#### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

#### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

#### Most important symptoms/effects, acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

#### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

#### General information

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

#### Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

#### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, hazardous combustion products are released that may include: Carbon oxides.

#### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. Water runoff can cause environmental damage.

#### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

#### General fire hazards

Flammable liquid and vapor.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.

**Large Spills:** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

**Small Spills:** Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Persons susceptible to allergic reactions should not handle this product. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits****US. ACGIH Threshold Limit Values (TLV)****Components****Type****Value**

alpha-Pinene (CAS 80-56-8)

TWA

20 ppm

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles). Face shield is recommended.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Skin protection****Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Appropriate respirator selection should be made by a qualified professional.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless to translucent red/orange.
<b>Odor</b>	Characteristic of citrus aroma.
<b>Odor threshold</b>	Property has not been measured.
<b>pH</b>	Not applicable (product is insoluble in water).
<b>Melting point/freezing point</b>	-140.8 °F (-96 °C)
<b>Initial boiling point and boiling range</b>	348.8 - 350.6 °F (176 - 177 °C)
<b>Flash point</b>	100.4 °F (38 °C)
<b>Evaporation rate</b>	Not defined due to complex mixture.
<b>Flammability (solid, gas)</b>	Not applicable, material is a liquid.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	0.7 % v/v in air
<b>Explosive limit - upper (%)</b>	6.1 % v/v in air
<b>Vapor pressure</b>	< 2 mmHg (68 °F (20 °C))
<b>Vapor density</b>	Not defined due to complex mixture.
<b>Relative density</b>	0.845 – 0.86 (Water=1) (68 °F (20 °C))
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable, product is a mixture.
<b>Auto-ignition temperature</b>	458.6 °F (237 °C)
<b>Decomposition temperature</b>	Not defined due to complex mixture.
<b>Viscosity</b>	0.9 - 1.1 mPa·s (68 °F (20 °C))
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Kinematic viscosity</b>	1 - 1.5 mm <sup>2</sup> /s (Based on d-Limonene) (68 °F (20 °C))
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Protect against direct sunlight. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Inhalation of mist or vapors may cause respiratory tract irritation.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction. May be absorbed through the skin.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics**

Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

**Information on toxicological effects**

**Acute toxicity**

Not expected to be acutely toxic.

Components	Species	Test Results
d-Limonene (CAS 5989-27-5)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 5000 mg/kg
<b>Oral</b>		
LD50	Rat	4400 mg/kg/day
<b>Other</b>		
NOAEL	Rat	300 mg/kg/day
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Respiratory or skin sensitization</b>		
<b>ACGIH sensitization</b>		
Turpentine and selected monoterpenes (CAS 80-56-8)	Dermal sensitization	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	May cause an allergic skin reaction.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Risk of cancer cannot be excluded with prolonged exposure.	

**IARC Monographs. Overall Evaluation of Carcinogenicity**

d-Limonene (CAS 5989-27-5) 3 Not classifiable as to carcinogenicity to humans.  
Myrcene (CAS 123-35-3) 2B Possibly carcinogenic to humans.

**NTP Report on Carcinogens**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Reproductive toxicity**

This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**

Not classified.

**Specific target organ toxicity - repeated exposure**

Not classified.

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**Chronic effects**

Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

**12. Ecological information**

**Ecotoxicity**

Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Components	Species	Test Results
d-Limonene (CAS 5989-27-5)		
<b>Aquatic</b>		
<b>Acute</b>		
Crustacea	EC50	Daphnia magna 0.421 mg/l, 48 Hours
Fish	LC50	Fathead minnow (Pimephales promelas) 0.702 mg/l, 96 Hours
<b>Chronic</b>		
Algae	NOEC	Green algae (Chlamydomonas variabilis) 4.08 mg/l, 96 Hours
Crustacea	NOEC	Daphnia magna 0.15 mg/l, 21 days
<b>Persistence and degradability</b>	No data is available on the degradability of this product.	

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient n-octanol / water (log Kow)**

Decanal (CAS 112-31-2)	3.76
Myrcene (CAS 123-35-3)	4.33
alpha-Pinene (CAS 80-56-8)	4.83
d-Limonene (CAS 5989-27-5)	4.232
	4.57

**Mobility in soil** The product is insoluble in water.

**Other adverse effects** The product contains a volatile organic compound which has a photochemical ozone creation potential.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

<b>UN number</b>	UN2319
<b>UN proper shipping name</b>	Terpene hydrocarbons, n.o.s. (d-Limonene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	B1, IB3, T4, TP1, TP29
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	242

### IATA

<b>UN number</b>	UN2319
<b>UN proper shipping name</b>	Terpene hydrocarbons, n.o.s. (d-Limonene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	3L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IMDG

<b>UN number</b>	UN2319
<b>UN proper shipping name</b>	TERPENE HYDROCARBONS, N.O.S. (d-Limonene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes

EmS	F-E, S-D
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.
<b>General information</b>	IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

## 15. Regulatory information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
-------------------------------	--

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

alpha-Pinene (CAS 80-56-8) Listed

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

<b>Toxic Substances Control Act (TSCA)</b>	All components of the mixture on the TSCA 8(b) inventory are designated "active".
--	---

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous chemical

<b>Classified hazard categories</b>	Flammable (gases, aerosols, liquids, or solids) Skin corrosion or irritation Respiratory or skin sensitization Aspiration hazard
-------------------------------------	---

#### SARA 313 (TRI reporting)

Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

Not regulated.

### US state regulations

#### US. Massachusetts RTK - Substance List

alpha-Pinene (CAS 80-56-8)

#### US. New Jersey Worker and Community Right-to-Know Act

alpha-Pinene (CAS 80-56-8)  
d-Limonene (CAS 5989-27-5)

#### US. Pennsylvania Worker and Community Right-to-Know Law

alpha-Pinene (CAS 80-56-8)

#### US. Rhode Island RTK

Not regulated.

#### California Proposition 65



**WARNING:** This product can expose you to Myrcene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Myrcene (CAS 123-35-3)

Listed: March 27, 2015

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	23-May-2025
Revision date	-
Version #	01
Further information	D - Face Shield, Gloves, Apron
HMIS® ratings	Health: 3 Flammability: 3 Physical hazard: 0 Personal protection: D

### NFPA ratings



### Disclaimer

Rio Grande Juice Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.